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Spring (October November **December**) 1984, Vol 4 No 4 (issue 14) \$2.95* NZ \$3.95

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EXPEDITION 1984**

Cover Thirteen-year-old Anna Hueneker revives her shoulders during a family bushwalk. (See her father's article on page 28.) Photo Klaus Hueneker. **Contents** Pelican. (For more bird photos see Folio on page 42.) Photo Tad Janocinski. *Maximum recommended retail price only

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Editorial Stepping Out

● WHILE OTHER MEMBERS OF 'THE WILD TEAM' have been ski touring the High Plains this winter (usually finding better snow than the Jeremiahs tell us is there), I have been rockclimbing at Mt Arapiles. The small number of climbers there most week-ends testifies to the unusually bleak conditions this winter. However, I have enjoyed the relative quiet, despite some wet epics.

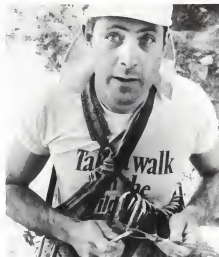
In early autumn I visited that magnificent Tasmanian peak, Frenchmans Cap. Our small group included Mike Law (see the article on him in *Wild* no 11) who, on several occasions, greatly amused the rest of us by 'measuring his length', face-down under an enormous pack, in the incredible mud of the 'sodden Loddon' Plains (see the photo on page 53 of *Wild* no 12). Fortunately we were able to extract him and go on to do ten or so new rockclimbs in this outstanding wilderness area.

Now I am planning a climbing, walking and photography trip to South Australia's Flinders Ranges. You'll be hearing how we get on!

Readers using their new *Wild* binders to get together previous issues have not been slow to observe changes that have occurred since their first number.

Evidence of *Wild*'s growth, in this our fourth year, will be seen in our having applied for membership of the Audit Bureau of Circulations, an international measure of the paid circulation of periodical publications. Readers will know that their support of *Wild*, tabulated in this way, is a further sign of this magazine's standing.

As part of our commitment to the 'grass roots' of the rucksack sports there is more news of club events and conservation happenings in the



Wild Information pages. We welcome details of forthcoming major events of interest to our readers, preferably in time to allow people to take part in them if they wish to do so! We look forward to hearing from you. ●

Chris Baxter
Editor & Publisher



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Wild Information

Daintree: Another Franklin?



• **Northern Battles.** It was recently reported in *The Age* that Queensland's Douglas Shire has announced it will proceed with its controversial road through Cape Tribulation rainforest in the Daintree National Park. (See article in this issue.) Once again conservationists are heading north to blockade works on the proposed road, where scores of them were arrested last December.

Another significant north Queensland rainforest area has become threatened with the State Government's announcement that logging is to start at Downey Creek, south-west of Innisfail. The Queensland Minister for Forestry, Mr Glasson, was reported to have rejected conservationists' appeals by saying (of logging interests): 'Some of these people won't take "no" for an answer.'

At the same time, American Dr Tom Lovejoy, Chairman of the International Union for Conservation of Natural Resources, was reported as saying that north Queensland's rainforests are the most valuable in Australia.

A prime mover in the defence of Queensland rainforest, the Australian Conservation Foundation has called for the Great Sandy

region (including Cooloola, Fraser Island and the Great Sandy Strait), 200 kilometres north of Brisbane, to be nominated for the World Heritage List.

The ACF initiated and largely funded a study of Cooloola National Park to demonstrate that natural areas, especially National Parks, have significant economic value to the community. Results of the recent study showed that Cooloola had created 171 jobs and generated far-reaching economic benefit worth millions of dollars.

Nearer Brisbane, the Conondale Ranges are seen by conservationists as offering an excellent opportunity to have a large area of mountain rainforest and mixed forest protected under a National Park. They are concerned that the Queensland Forestry Department is allowing this area to be logged. Readers wishing to help protect the area should contact the Conondale Ranges Committee, PO Box 158, Maleny, Queensland 4552.

• **Peak Experience.** Two areas of central Queensland's Peak Range were gazetted recently to bring the number of National Parks

Tropical coast near Cape Tribulation. Leo Meier

in Queensland to 311. The areas declared are the Gemini Mountains and Wolfgang Peak. Their combined area is almost 1,000 hectares.

• **Marathon Canoe Race.** The Goodtime Brisbane Valley 100 will run over the week-end of 6-7 October.

Entrants are faced with a 100 kilometre course; a 50 kilometre leg from the face of the Wivenhoe Dam to Colo, to be paddled twice.

The race, in its seventh year, is expected to attract over 200 entries. The entry fee is \$30. Of that, \$20 goes to the Queensland Spastic Centre, as do all the other proceeds from the day. Entries can be obtained from the Queensland Canoe Federation or Goodtime Canoes, 29 Ipswich Road, Woolloongabba, Queensland 4102.

Julian Mather

• **Rainforest Run.** During September, the rainforests of Queensland's Lamington National Park will again play host to one of Australia's most scenic long-distance runs.

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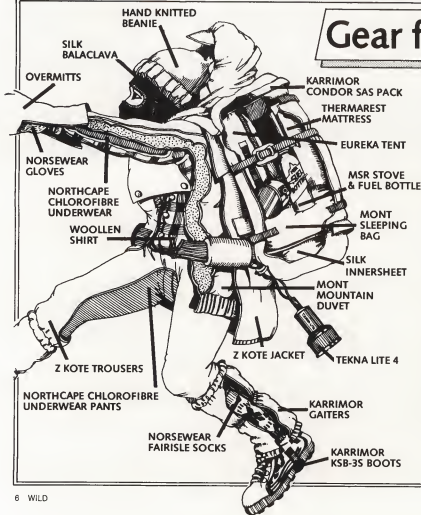
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The Lamington National Classic, now in its twelfth year and organized by the Queensland Marathon Club, is a 32 kilometre circuit from Binna Burra to O'Reillys.

JM

• **Koala Disease.** A documentary film completed in Queensland this year is claimed to be the first detailed study of koalas and their habitats. The film is reported to shed new light on a form of venereal disease which has substantially reduced koala numbers. A

They reportedly mistook the Kanangra Creek-Coxs River junction for the Coxs River-Breakfast Creek junction and started heading south along Kanangra Creek instead of north along Coxs River. Experienced bushwalkers were baffled at their error particularly as the weather at the time was clear and sunny.

An extensive foot and helicopter search failed to find them until the eighth day after they had left. Fortunately for the three, one of the helicopters was manned by some canyon enthusiasts who decided to photograph Davies



Cow Bay subdivision near Cape Tribulation. Meier

Queensland University lecturer, Dr Steve Brown, believes he can cure them with a vaccine he is to import from England.

• **Canoeing Epics.** This year's Outward Bound Hawkesbury Canoe Classic, one of Australia's major marathon canoe races, is to be held on 13-14 October. The 111 kilometre race runs overnight from Windsor to Brooklyn, New South Wales. It raises money for the Multiple Sclerosis Society of NSW. Information can be obtained from Southern Cross Equipment and Canoe Specialists (see Directory).

Another major NSW event is the Nepean River 100 Mile Canoe Race, held this year on 24-25 November. This year's event will raise money for the NSW Division of Red Cross. Details can be obtained from Alison Hughes (02) 631 7501.

The New South Wales Canoe Association is organizing a Marathon Series of no less than five events, each of 20-30 kilometres. The first is on 15 September. These lead up to the NSW Marathon Championships next March and the Australian Championships at Perth in April. The Secretary of the NSWCA can be contacted on (02) 848 0839.

In Victoria, the Geelong Canoe Club is claiming two canoe relay world records: 300 kilometres in 23 hours 57 minutes and 25 seconds, and 300.45 kilometres in 24 hours. Twenty-two club members, in a variety of craft, set the records (the first of their type) on the Barwon River in May.

• **Eight-Day Ordeal.** A party of three bushwalkers lost in the Blue Mountains of New South Wales was found eight days after they had set out from Katoomba. They had set off for a trip in the Wild Dog Mountains.

Canyon. The walkers were spotted near the base of a large waterfall in the canyon, well away from the area on which police had concentrated their search. They were unharmed although short of food.

Roger Lembit

• **Management Plans for Blue Mountains National Parks.** Fifty years ago, in 1934, Myles Dunphy proposed a Greater Blue Mountains National Park. It is fitting that management plans for such a Park are now being drawn up.

The Blue Mountains are covered by three Parks: Blue Mountains, Kanangra-Boyd and Wollemi. With historical rather than geographical boundaries, it is sensible that plans for each Park are being drawn up at the same time.

The New South Wales National Parks and Wildlife Service is spending a great deal of effort on the plans, and draft versions should be available by September, or soon after, for public comment.

Issues to be raised in the plans include protection of wilderness, fire management, noxious weeds and animals, and the closure of four-wheel-drive roads.

Dave Noble

• **Fiftieth Anniversary.** Two Sydney bushwalking clubs celebrate their fiftieth anniversaries this year.

The Coast and Mountain Walkers owe their existence principally to the efforts of Ninian Melville. He also, incidentally, led the club's first 54 walks! The club has been celebrating with a number of slide nights and a dinner.

The Ramblers (formerly the YMCA Ramblers) also are celebrating their golden jubilee. A special anniversary walk or picnic is being planned for October.

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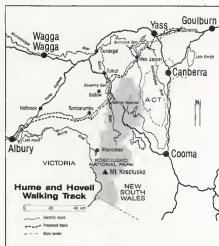
● **Conservation Conference.** A conference for environmentalists was held at Lane Cove National Park in Sydney on 2-6 July. Organized by the Total Environment Centre in Sydney, the course covered issues such as politics, media, bureaucracy, private enterprise, building community support and organizing a campaign.

Prominent speakers provided a comprehensive account of how to approach and influence the various sectors of society on conservation matters.

Perhaps of greatest value, according to those who attended, was the opportunity to meet others working in environmental organizations throughout Australia, and to share experiences. The conference can be seen as indicative of the professional approach now being taken by environmentalists and their desire to co-ordinate conservation on a national level.

The meeting was the first of its kind in Australia and conservationists hope that other such conferences will be held to enable more effective campaigning, and greater awareness of conservation issues.

Jo Millar



● **Historic Walking Track.** As part of the 1988 Bicentennial celebrations, the New South Wales Department of Lands has started work on the construction of a walking track from Gunning to Albury, retracing the epic journey of Hume and Hovell in 1824-25.

● **Proposed Environmental Protection Laws.** It is reported in the Press that the Australian Government is planning a revolutionary package of environmental controls.

Proposals under consideration include protection of the bush by a ban on woodchipping of native forests, tighter control on the clearing of native vegetation and adoption of a wider definition of rainforests.

Other proposals include the production of regular state-of-the-environment reports by the Government, financial assistance to States to manage World Heritage areas and to acquire critical areas of habitat for endangered species, measures to ensure the conservation of kangaroos, the location of a national register of chemicals and steps to preserve Australia's wetlands, waterways and marine areas.

Penalties for offences under the 1974 New South Wales National Parks and Wildlife Act were substantially increased last January. Heavy fines or several years' imprisonment can be the 'reward' for conviction of damaging or possessing certain flora and fauna.

● **New Park.** The Warrabah National Park, near Armidale, New South Wales, was recently

announced. Comprising 3,396 hectares, it is on the Namoi River.

● **Awards.** The annual Park Writers' Awards, funded jointly by the National Parks and Wildlife Service of New South Wales and the Literature Board of the Australia Council, are made to raise public awareness of environmental issues.

In the 1984 awards, Robert Adamson of Sydney was awarded \$6,000 to work on a book of poetry on Brisbane Waters National Park. Mark O'Connor of Townsville was awarded \$3,350 for work on poetry on the Blue Mountains and Royal National Parks. Janusz Rygielski of Ipswich has been awarded a \$520 supplementary grant to complete his work on Kosciusko National Park.

● **Fire.** A research fellow at Canberra's National University is quoted in the Press as saying that a single major fire can permanently change a forest. Dr David Green is reported to have told a recent conference that rainforest, particularly, was vulnerable to permanent loss from fire. To save such areas it is important to control access to them, he said.

● **Kosciusko Capers.** The twentieth Paddy Pallin Cross Country Ski Classic was held on 4 August. To celebrate the twentieth anniversary of the event there were two races this year — the normal Classic (25 kilometres) and a new event, the Paddy Lopsett (42 kilometres). Visiting Japanese skiers won both events and filled the first three places in the Lopsett. The winners were T Mamba (two hours, nine minutes and 51 seconds) and A Egawa (one hour, nine minutes and two seconds). The first woman in the Classic was Kate Crowley in twenty-seventh place (one hour, 39 minutes and 46 seconds).

(Paddy Pallin has produced, on behalf of the New South Wales Ski Association, a useful pamphlet on cross country skiing in NSW. It includes general information on the sport and on hypothermia.)

The NSW Government has given the go-ahead to the first stage of the underground railway reported in *Wild* no 8. The \$30 million railway — the ski tube — will be 3.5 kilometres long, under the Rams Head Range. The first stage is to be open by 1986. Already local ski accommodation businesses are cashing-in on the ski tube in their advertising and the NSW ski resort industry is seen by observers as being in for a period of substantial expansion.

● **Tour Off.** A tour of Australia by popular British conservationist, Professor David Bellamy scheduled for June was cancelled.

● **Redevelopment Plans.** Plans are apparently afoot for the Committee of Management of Victoria's Mt Buller ski resort to oversee the 'redevelopment' of the area by spending some \$60 million over the next five or six years. The plans are reported to involve a \$30 million redevelopment of the Kooroora Chalet as 'a three-star hotel with apartment blocks'.

● **Classic.** The Wildtrek Winter Classic, 1984, was held in the Omeo/Mt Hotham area of eastern Victoria on 21-22 July.

With 32 combination teams (six members each) and 14 marathon teams (two members each), entries were double that of the 1983 inaugural event.

The course consisted of four sections on the Saturday, cross country skiing, running, cycling and canoeing, totalling 95 kilometres, and three

Wildtrek Classic 1984: Frank Lynch ponders the fate of his canoe which is submerged in the Mitta Mitta River and, above, the cross country run section.
Kaine Pinder



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sections on the Sunday (skiing omitted), totalling 34 kilometres. It was a demanding course, with perhaps the cross country run being considered the most difficult section.

Times were faster on all sections compared with the previous year. Competitors showed greater preparedness, and standards were high. The Pinball Machine rapid on the Mitta Mitta River was the cause of many paddlers' undoing. One down-river racing boat ended its career wrapped round a rock.

Hallmark was again the major sponsor of the event.

The winning combination team was Mark Jenkins, John Jacoby, Tony Zerst, Greg Paul, Trevor Paul and Michael Walters. They completed the seven sections in nine hours 24 minutes and 41 seconds. The winning marathon team was Rod Harris and Roy Smith. Their time was 11 hours three minutes and 11 seconds.

Last year's winning teams both came second in their respective categories this year. The competition will be hot for next year!

Yvonne McLaughlin

● **Thomson River Canoe Trail.** At the instigation of the Victorian Department of Youth Sport and Recreation, a working party has been established to investigate the development of a 'canoe trail' on the Thomson River.

The working party consists of representatives from the Department of Youth Sport and Recreation, Victorian Canoe Association and various Government Departments. Its primary aim is to promote the safe use of the Thomson River for canoeing, rafting and other purposes.

The section being considered is from Lake Thomson Dam to Cowarr Weir, a distance of approximately 50 kilometres. This section passes predominantly through State Forest and close to the historic Walhalla gold mining area. It encompasses a variety of water conditions, including the Thomson Gorge.

YMcL

● **Rogaining.** The Victorian Championships were contested by a field of 250 at Mt Despair in May. Overall winners were Tony Brown and Matt Campbell, closely followed by David Church and rogaining novice Craig Nottle (who is currently attempting to climb the West Ridge of Mt Everest).

The fifth Australian Championships were to be held in August in the Southern Tablelands of New South Wales. We expect to report results in a subsequent issue.

● **Yarra.** The Upper Yarra and Dandenong Ranges Authority has produced a management strategy plan for the 120 kilometre section of Victoria's Yarra River from the Upper Yarra Dam to Wandarrady. The aim of the plan is to co-ordinate management of the river which is regarded as one of Melbourne's most valuable resources.

● **Barmah.** Another Victorian waterway area that has been in the news is the 28,500 hectare Barmah Forest on the Murray River. It has one of Australia's finest stands of red gum and over 200 species of birds. The Victorian Bird Observers Club claims that cattle grazing is affecting the delicate ecology of the area.

● **Diary.** The 1985 Australian Conservation Foundation Wilderness Diary is an interesting variation on the increasingly popular 'wilderness calendar' market. The ACF has produced an attractive desk diary containing 55 colour photographs of some of Australia's finest

wilderness areas. Kakadu, South-west Tasmania, Cape Tribulation and Errindundra are among the areas depicted, and with printing of a quality not often seen here, the diary should prove popular. It is available from the ACF, 672B Glenferrie Road, Hawthorn, Victoria 3122 for \$12.95 plus \$1.50 for postage.

● **Birds.** The Royal Australian Ornithologists Union is publishing a 1985 calendar that includes 13 colour photographs by leading bird photographers; \$8.00 each, including postage, from RAOU, 21 Gladstone Street, Moonee Ponds, Victoria 3039.

● **Timber!** The Victorian Timber Industry Enquiry, reported in *Wild* no 13, is expected to produce its final report in May 1985. The Chairman, Professor Ian Ferguson, has held interviews in Melbourne and 12 other centres. Written submissions closed on 31 July. There is then to be a series of public hearings in four Victorian centres in August and September.

● **Scouting for Business.** In August the Scout Outdoor Centre opened a major new shop at 360 Lonsdale Street, Melbourne.

Claiming 'to cater for the novice bushwalker as well as the experienced gear freak' (!) it indicates the significant 'up-market' move made by at least some of Australian scouting's retailing arm in recent years. (Funds generated by the Scout Outdoor Centre are said to be directed entirely to youth work through the Scout movement.)

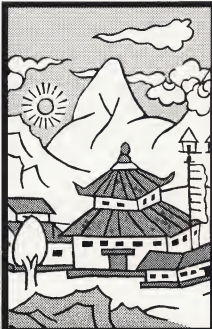
● **Touring On.** The Ski Touring Association of Victoria has commissioned an investigation into the demand for cross country skiing and what motivates people to take it up and continue with it. STAV hopes the research will enable planning and development for all cross country skiing in Victoria. The results of the study are expected to be available in December.

● **Grampians National Park.** On 1 July the Honourable Rod Mackenzie, Victorian Minister for Conservation, Forests and Lands, declared the Grampians National Park and unveiled an appropriate commemorative plaque, during a short ceremony at the Borough Huts camping area, within the National Park. Over 500 people were present from a wide range of organizations (some of which have bitterly opposed the National Park) to witness this realization both of an election promise by the Victorian Government and of the long-held ambition of many conservation groups and individuals concerned for the protection of the extraordinary natural features of the Grampians.

John Miller, formerly of Wyperfeld and Brisbane Ranges National Parks has been appointed Ranger-in-Charge of the new Park — Victoria's largest, at a daunting 167,000 hectares. Staff of the former Forests Commission employed in the Grampians will remain in their jobs. The extent of new appointments remains to be seen.

Management of the Park will eventually become the direct responsibility of the new Regional Manager of the Department of Conservation, Forests and Lands based in Horsham. The National Parks Service will then retain a planning and monitoring role for the Grampians National Park.

Meanwhile, the Service's Grampians Planning Team has completed stage one of the preparation of a management plan — the publication of a comprehensive resources inventory for the National Park. Closing date for public submissions on the management



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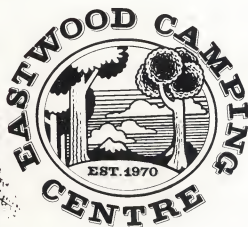
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implications listed in the document was 31 August but late submissions will be accepted. This is your first chance to have a say in how the National Park will be run. Copies of the inventory, or of a shorter summary document, may be obtained from the National Parks Service, 240 Victoria Parade, East Melbourne, Victoria 3002. Send your ideas to the Grampians Planning Team, PO Box 201, Stawell, Victoria 3380. The draft management plan will be available for public comment and submissions in February 1985 and the final management plan will be completed in June 1985.

Sandra Bardwell

• **Speleomania.** The fifteenth biennial conference of the Australian Speleological Federation will be held in Hobart next January. The conference will emphasize modern caving techniques, surveying, and cartography using computers. This emphasis is in line with the reputation Tasmania has acquired for its deep, wet and technically sporting caves. Surveying and map-making are also of significance to Tasmanian cavers who seem to discover plenty of new caves each year.

For those wishing to participate in some of the imminent discoveries there will be both pre-and post-conference field trips. This is an ideal opportunity to visit some of Australia's best caves including the longest, the deepest and the most beautiful.

The dates are 7-10 January 1985 and accommodation is at the Lea Scout Camp in Hobart. For more information or a booking form, contact Speleomania, PO Box 121, Moonah, Tasmania 7009.

Stephen Buntin

• **International Conference Postponed.** The ninth conference of the International Union of Speleology, due to be held in Spain in July 1985, has been postponed indefinitely. No reasons have been given. A large contingent of Australians usually attends these IUS conferences which are normally held every four years.

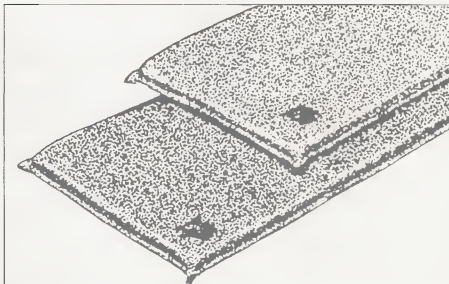
SB

• **Solo Cave Diving.** A number of Australian scuba divers have recently extended their interests to include cave diving, mostly at the idyllic location of Mt Gambier. Similarly, a number of Australian cavers have learned scuba diving techniques to extend the limits of cave exploration. Most of Australia's deep caves end in sumps where water floods the passage to leave no available airspace. As domestic cave prospects decrease, harder cave explorers are taking up cave diving to increase their chances of making new discoveries.

A group of Tasmanian cavers/scave divers has been very active in the Juneo-Florentine area. The most notable of these are Stefan and Rolan Eberhard who have discovered and explored many of that State's deepest caves. The brothers are cave divers as well as cavers.

The most recent notable achievement in the area was the exploration of Pendant Pot which was thought to join Growling Swallet. Pendant Pot ended in a sump which, according to the survey, was a mere 30 metres from known water in Growling Swallet. This prospect made it possible for a classic through trip. Rolan Eberhard made this first trip solo. He abseiled down Pendant Pot, pulling his ropes down behind him. At the terminal lake he donned his diving gear and 'baby bottle' dived through the sump and arrived in Growling Swallet where it was a straightforward trip out to the entrance.

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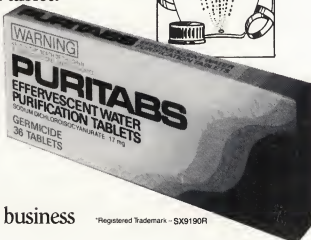
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• **Tasmanian Forests Campaign.** In Tasmania, the forests campaign has replaced the Franklin as the dominant environment issue. It is spearheaded by the Forest Action Network (FAN) a coalition of national and local groups which includes the Wilderness Society and Australian Conservation Foundation.

FAN is proposing National Park extensions to protect wilderness and for scientific purposes. These areas contain rainforest, the world's tallest eucalypt stands and remnants of dry eucalypt communities. The major proposal is for an enlarged Western Tasmanian National Park.

At the same time, FAN researchers are developing an alternative forest management plan to maintain or increase employment in forest industries. FAN is also seeking better logging practices.

The main focus at present is the environmental impact statement on export woodchip licences. The draft will be published in September and there will be a two-month period for public comment.

The Franklin may be safe, but much is still at risk. Forestry threatens 29% of Tasmania's remaining wilderness area. Further information: Jonathan Miller, 102 Bathurst Street, Hobart, Tasmania 7000. Phone (002) 34 5566.

• **Franklin Compensation.** In *Wild* no 13 we reported that the Federal Government had offered Tasmania some \$270 million in compensation for the Franklin River decision. The agreement between the two governments has now been settled, but the Wilderness Society says it may challenge the compensation scheme in court.

• **Freyfincet Feat.** The beautiful Freyfincet Peninsula on Tasmania's east coast is to be the scene of the Freyfincet Foot Flogging Club's inaugural runs on 30 December (see Club News).

• **Coasters.** The 1985 Coast to Coast race across New Zealand's South Island will be held on 2-3 February. The race involves running, cycling and kayaking.

• **New Route.** Rob Hall and Steve Lasche made the long-awaited winter ascent of Mt La Perouse in New Zealand's Mt Cook National Park in June. They climbed the East Face, from Gardiner Hut.
Colin Monteath

• **New Zealand's Deepest Cave.** Over recent years cave explorers have extended the limits of Nettiebed Cave near Nelson. Each Christmas the New Zealand Speleological Society has mounted an expedition to the area. Numerous Australians have participated in these expeditions.

Nettiebed Cave is located near the Pearce River Resurgence at the base of the Mt Arthur Marble Massif. The cave extends uphill following the underground streams which drain from the caves on top of Mt Arthur. The highest point in the cave is now 685 metres above the level of the Pearce Resurgence. This makes Nettiebed Cave the deepest cave in both New Zealand and the Southern hemisphere.

In an attempt to find the top entrance to the Nettiebed system, many new caves have been explored on 'the tops', the slopes of Mt Arthur itself. The most notable of these caves is simply called HH which sinks to a depth of approximately 620 metres. HH has not yet been fully explored, or surveyed. It could prove to be New Zealand's deepest cave or it could connect

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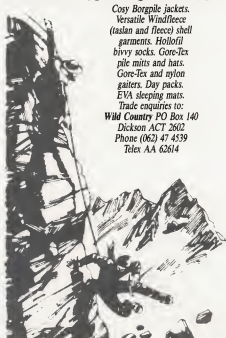
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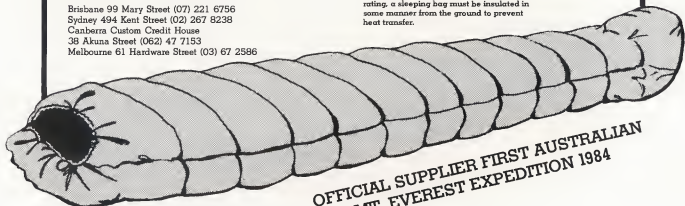
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into Nettlebed Cave which would increase the depth of the whole system to approximately 850 metres.

The Nelson region has long provided an opportunity for cavers to explore good, deep, sporting caves. Many, such as Harwoods Hole and Greenlink, have become classics. Harwoods Hole has a 176 metre free-hanging abseil entrance and a superbly decorated streamway leading to Starlight Cave. Greenlink follows a fast flowing river down a series of waterfalls — over 20 pitches in all. There are two sumps at 287 metres depth followed by a 44 metre pitch down the middle of the water. The cave ends in a rock pile at 372 metres. The return trip to the end of the cave takes over 20 hours, so exploration has been abandoned for more tangible objectives.

With such a wealth of cave potential it is easy to see why so many Australians make a trans-Tasman pilgrimage each year.

SB

• **Australians on Mt Everest.** The two 1984 Australian Everest expeditions mentioned in *Wild* no 13 are currently on the mountain. We expect to have full details of both attempts in our next issue. The attempt from Tibet will be filmed for international television release next February.

Greg Child writes that he has changed his mind about going to Mt Everest in an American expedition next year.

• **Mountain Films.** The ninth annual Banff Festival of Mountain Films will be held on 2-4 November. Details: PO Box 1020, Banff, Alberta TOL OCO, Canada.

• **More on Yosemite.** Following our report in *Wild* no 13 more information is to hand on Tony Dignan's El Capitan climbs. He climbed The Nose in two days and it was on Pacemaker that he and his partner ran out of food — for seven days!

• **Corrections.** In *Wild* no 13 we misprint gentoo (penguin) in the photo caption on page 45, and Fischer (skis) in the table on page 79. 'Ski contact length' (figure 1 on page 78) was incorrectly shown. It should have been shown as the distance between the two points on which an unweighted ski rests. The text, only, in the box on page 65 of issue 13 should have read:

Ben Boyd National Park flanks Twofold Bay and the township of Eden on the south-east coast of New South Wales. The northern section, which is reserved for day use, is bordered by the Pambula River and Lake. The southern section extends past Green Cape, with its disused lighthouse, to Disaster Bay. Care should be taken when approaching this area because the narrow forest roads have to be shared with heavy logging vehicles working in the adjoining State Forest.

Camping. No camping is allowed in the northern section. Basic camping facilities are provided at Saltwater Creek and Bittangabee Bay in the southern section. Bookings are necessary for holiday periods. There are serviced commercial camps at Eden, Twofold Bay and Pambula.

Park Office. PO Box 186, Eden, NSW 2551.

Maps. National Mapping sheet *Eden* covers most of the Park, while small sections are contained on *Green Cape* and *Bega* (all 1:100,000). Central Mapping Authority sheets *Kiah*, *Pambula* and *Eden* (all 1:25,000) show excellent detail. The New South Wales State Forests sheet *Eden* (1:125,000) is also available.

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Getting Started

Hypothermia

How to handle it, by Yvonne McLaughlin.



● **HYPOTHERMIA (EXPOSURE)** IS THE CONDITION associated with the dangerous lowering of the body core temperature. The brain, heart, lungs and other vital organs cannot function if their temperature falls too low. The onset of hypothermia can be swift, and if it is allowed to progress unrecognized, death can follow within one hour.

The real danger of hypothermia is that it is not easily recognized, either by the person affected or by his companions. In fact a whole party may be, more or less, affected without anyone being aware of it.

Anybody can get hypothermia. Any combination of wind, water or cold should be regarded as potentially dangerous, alerting you to the possibility of hypothermia. Consequently, whatever the activity, length of trip or time of year, you must be prepared for bad weather conditions. This means windproof and waterproof outer clothing, woollen clothing, hat and gloves and appropriate footwear for skiing, walking and other outdoor activities.

Canoists and rafters should always be warmly dressed, either in woollen clothing and/or a neoprene wetsuit, with a windbreaker jacket. A woollen hat under the helmet is worthwhile, as up to one third of the body's total heat loss can be through an unprotected head.

While skiers and walkers usually keep dry in the normal course of events, canoeists and rafters are generally subjected to continual wetting, even in the absence of capsize. Wet clothing drains heat from the body at an

Not much chance of exposure here! (In Cascade Hut, Snowy Mountains, New South Wales.) Rod Murphy alarming rate. The thermal conductivity of water is 25 times greater than air. Complete immersion can lead to serious consequences in cold, windy conditions.

For safety, four is the minimum number for a party. A party of two is too weak to help itself in a dangerous situation. If four are in the party, one can stay with the sick person while two go for help. All party members should be aware of the dangers of hypothermia, and should learn to watch each other (the buddy system) for symptoms.

Those most likely to develop hypothermia are the unprepared, the unfit, thin people with little fat to act as insulation, the young (under 17) and the old (over 65), and people who have been ill or injured recently. Low morale, possibly due to the overwhelming nature of a situation, or inexperience may lead to a greater susceptibility to hypothermia. Other things being equal, men are more susceptible than women, who have more fat per unit of body weight and a greater tolerance to physical stress.

The first symptoms of hypothermia, lack of co-ordination, slurring of speech, irrationality, weakness and shivering, are frequently mistaken for simple fatigue. If not recognized and treated, the victim is on a rapid downward spiral. The stages of hypothermia, in order of increasing severity are:

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poor co-ordination, shivering begins
35° - 34°C more obvious unco-ordination and weakness, confusion and apathy, still shivering
34° - 32°C serious muscular unco-ordination, mental sluggishness with slow thought and speech, loss of memory, still shivering

32° - 30°C shivering stops, stiffness, inability to walk or stand; incoherence, confusion, irrationality, skin cold to touch, blue or puffy

30° - 28°C semi-consciousness, dilated pupils, heart beat and pulse not apparent

28° - 25°C unconsciousness, followed by death due to heart stopping

Cold water immersion will produce hypothermic symptoms and sudden immersion in water colder than 10°C causes immediate and intense difficulty in breathing. Gasping and inability to control breathing may cause a swimmer to panic. Even when wearing a wetsuit, a cold swim will reduce co-ordination and dull reactions dramatically.

Whenever the head is covered by a wave (even if only for a few seconds) a swimmer is likely to inhale water. The gasping and rapid breathing can produce hyperventilation within ten seconds, and this can lead to unconsciousness.

Depending on the kind of protective clothing worn, a swimmer's core body temperature drops from 37°C to about 35°C in two to ten minutes. At this low core body temperature useful work becomes difficult and often impossible.

Once in the cold water, the swimmer's body automatically responds by cutting off blood circulation to the skin in an attempt to conserve heat. Reduced blood circulation prevents the transport of energy supplies required by the muscles to perform voluntary work. Thus voluntary movement of the extremities becomes increasingly difficult, sapping body strength and incapacitating the swimmer. In this situation the swimmer must get out of the water as quickly as possible, and will usually need his companions' assistance.

Still unexplained is the sudden onset of severe exhaustion experienced by even champion swimmers after a few minutes in very cold water (4° to 5°C). It is thought to be related to the high viscosity of the cold water which requires increased effort to produce swimming movements. This might explain the 'sudden disappearance syndrome' when victims suddenly collapse and disappear while attempting to swim a relatively short distance in very cold water.

The ambient winter temperature of southern inland rivers is about 7°C. Extra care should be taken on the very cold waters of snow-fed rivers, and rivers where water is released from a storage dam, and on deep lakes.

If hypothermia is suspected, stop and find shelter from the wind immediately, behind rocks, in a hut, or wherever possible. Put on extra warm clothing. If possible light a fire, make hot drinks, have something to eat. Food is the body's fuel, producing heat. Recovery can be rapid, but if it hasn't occurred within 15 minutes, it is likely that the victim's body core temperature is less than 35°C, he cannot rewarm himself and it is up to the other party members to rewarm him.

Give warm, sweet drinks and easily digested food. He must be treated on the spot. If practicable, set up camp and change him into dry woollen clothing (don't completely undress him to do this). Put him in a sleeping bag with another group member; with two, if a double sleeping bag is available. Body temperature may continue to fall slowly for another hour or so after rewarming treatment has begun. Consequently, early recognition and immediate

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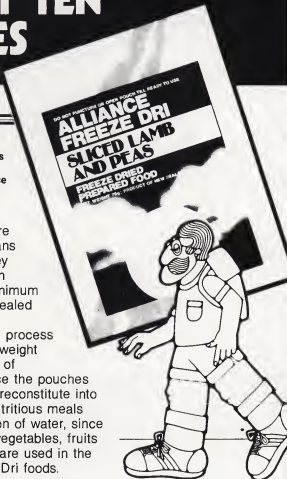
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treatment are essential and treatment should be maintained until the victim is completely recovered.

If the victim has been in a state of near collapse he should not be moved for at least a day. Food and drink should not be given until the victim can take it for himself. Do not give alcohol, rub the body or apply localized external heat since this only sends cold blood from the extremities to the central core, which has its temperature further lowered.

In severe cases where the victim has collapsed and breathing stops, mouth-to-mouth resuscitation should be applied. This should be continued until normal breathing resumes.

In the case of cold water immersion, if the victim is young and fit, and the water is very cold, the chances of survival may be better than at first appeared if he was not breathing when pulled out of the water. A biological phenomenon, called the mammalian diving reflex, triggered by the shock of cold water, enables humans, like whales and seals, to live without breathing for longer than normal. When a person's face hits cold water, his heart rate goes down, his blood pressure goes down, the blood flow in the legs and arms decreases and is shunted to internal parts of the body. That slows the metabolic rate and reduces the need for oxygen.

The lesson here is not to give up resuscitation attempts too soon. The chance of recovery, without brain damage, is greater than if the water had been warmer.

Frostbite is another close relative of hypothermia. This is a localized injury, produced by cold, in which the affected tissues are frozen. The most commonly affected parts of the body are those which are usually exposed (nose, cheeks and ears) and those with the poorest blood supply (hands and feet).

When the body temperature drops below 35°C it is the skin surface and extremities which receive reduced blood flow as the body tries to retain normal temperature at its core. In this situation the extremities become colder, a condition that is aggravated by wet clothing. The skin and superficial tissues begin to freeze and with continued chilling more and more tissues freeze solid.

Superficial frostbite only involves the skin or the tissue immediately beneath it. The skin appears pale, greyish-white, hard and frozen. Pain is usually felt early, but later subsides. The affected part feels intensely cold or numb. After rewarming, the area will be numb and mottled blue or purple; it will then swell, sting or burn for some time. In more severe cases blisters will form and pain may persist for several weeks. Eventually the skin will peel and remain red and abnormally sensitive to cold.

Deep frostbite is a much more serious injury, and usually associated with the more severe cases of hypothermia. The external appearance is the same as for superficial frostbite, but the freezing goes deeply into tissues (even to the bone). There is no pain in the area initially, but huge blisters and swelling develop later. Pain may be experienced for many weeks and permanent loss of some tissue is highly likely.

The basic treatment for hypothermia will also treat superficial frostbite, but in the case of deep frostbite, get the victim to medical aid urgently. Slow and inadequate rewarming in the field, particularly if refreezing follows, invariably leads to gangrene.

Efforts to thaw deeply-injured parts should not be attempted until the victim has reached a place where his entire body can be kept warm during and after treatment, and from which he can be moved without having to use the injured extremity. You can walk on your frozen foot, but

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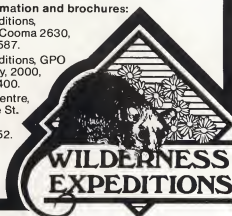
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Dave Noble

not once it has been thawed.

Hypothermia is a very serious condition. A person may survive two to three weeks without food and three or more days without water, but a drop of 4°C in body core temperature may mean only two to three hours of life.

The chief hope for victims lies in their companions. Sometimes this could be a false hope as, when one person suffers, the chances are the others are on the verge of being affected also. However, the members of a fit, well equipped and well prepared group, each of whom is aware of the signs and treatment of hypothermia, are the ones least likely to succumb. ●

Further reading

Survival by Lex Lannoy and Peter Nicholls (Horwitz Grahame, 1982, RRP \$9.95).

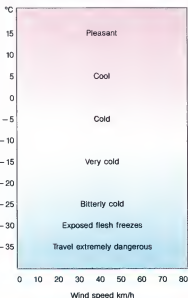
Stay Alive, Handbook on Survival by Maurice Dunlevy (Australian Government Publishing Service, third edition 1981, RRP paperback \$4.00, waterproof \$9.50. Add \$0.70 if ordering by mail).

Bushwalking and Mountaineering Leadership Manual of the Victorian Bushwalking and Mountaineering Training Advisory Board (Victorian Department of Youth, Sport and Recreation, second edition 1981, RRP \$3.00. New edition due 1985).

Death by Exposure is Not an Accident Brochure (Federation of Victorian Walking Clubs, GPO Box 815F, Melbourne, Victoria 3001. Quantities of less than ten are free).

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Contributors

Gregg Borschmann learned to type when doing the shipping notices and auction results at *The Age* newspaper as a cadet journalist. He chased pop stars, politicians and only one fire engine, that he can remember, during eight years working in Melbourne and Sydney for *The Age* then as a feature writer for *The Daily Telegraph*.

Two years ago he went looking for the great Australian legend, travelling the Australian bush as an independent journalist. He hasn't found



the legend yet, but there have been plenty of maddening and gladdening surprises. Most of this year has been spent researching and writing about Australia's wet tropical rainforests.

Cliff and Dawn Frith are zoologists now working as freelance photo-journalists in northern Queensland. Their outstanding wildlife photography has illustrated many books and magazines, both popular and specialist, in many languages.



They now specialize in tropical Australia and accept assignments throughout the South Pacific, New Guinea and Indonesia.

Their first book, *Australian Tropical Rainforest Life*, was published last year.

Glen Nash is a professional guide who has worked for many of Australia's largest adventure travel companies. He is an active climber and ski mountaineer having led many trips in the Australian Alps and to the mountains of Europe and New Zealand. He is currently employed by Rockcraft Climbing School. Glen is also a keen mountain photographer and writer in his spare time.

Bishop Ian Shevill was Bishop of North Queensland for 17 years. After this he was for four years Assistant Bishop of London and secretary of the oldest of the Anglican Missionary Societies (USPG). During this period he travelled extensively in Africa and the Far East. In 1973 he was posted to Newcastle, Australia. He has the unique achievement of



having supervised the completion of two Cathedrals (St James, Townsville and Christ Church, Newcastle). His experiences in north Queensland brought him into close contact with the problems of ecology.

In 1977 he suffered a stroke and since that time has been writing weekly Christian articles for Brisbane's *Sunday Mail*. Amongst his books are *Half Time*, *God's World in Prayer*, *One Man's Meditations* and *Going it With God*.

Macgregor Stewart has an unlikely background for the manager of Mountain Designs' thriving Sydney shop. An Arts graduate who majored in philosophy at Queensland University, he then researched animal ecology for three years in Griffith, New South Wales, before joining Mountain Designs.

Macgregor's outdoor interests have included sailing (since he was three years old) and, more recently, bushwalking in Queensland's coastal regions, and some rockclimbing.



HISTORY IN THE M

Klaus Hueneke continues his history of the Snowy Mountains.

• DEVELOPMENT AND CONSERVATION ARE odd bedfellows, generally considered incompatible and mutually exclusive, but in the Snowy Mountains they have defied history, joined forces and given birth to a pair of magnificent twins, the Snowy Mountains Scheme and a National Park worthy of world status.

The great Australian catch-cry — 'irrigate the inland by damming and diverting' — finally took hold in the 1940s and in rapid succession led to the

declaration of Kosciusko National Park (1944), the building of Guthega Dam (early 1950s), the bulldozing of the Alpine Way (1956), the cessation of grazing by sheep and cattle but not by wombats and wallabies (in 1958), and the creation of hundreds of kilometres of survey tracks and fire trails.

New roads, in combination with new European faces and refreshed aspirations, soon led to new beehives like Thredbo, Perisher, Guthega and Mt Selwyn, and to

new access heads for skinny-board skiers, sherpa-soled scrub bashers, bush cyclists and jodhpur-attired followers of the cult of the Man from Snowy River. Other forces such as increasing affluence, more time away from work and the dawning realization that the Australian bush is not so monotonous after all, soon added up to a hell of a boom in the numbers of rucksacks, light tents, slim skis, hardy boots, nylon jackets, sun hats, canvas water bags and meals of gluggy



AKING

wilderness experience had to be shared.

Such sharing came as a surprise to old skiers like Ted Winter, Elyne Mitchell, George Day and Ken Breakspear but was not new to the hundreds of Finns, Austrians, Norwegians, Germans, Italians, Poles and Yugoslavs who blasted the diverting tunnels and poured elegant concrete 'Christo-curtains' across numerous untouched valleys. Many of them 'made a packet', were seduced by the magic of the mountains, found a way of staying on and, in the case of Robbie Kilpinen, Kore Grunnsund and Otto Pinkas, set new endurance skiing records.

In the early 1960s the Kiandra-

52 minutes. Having broken the flying Finn's time as well as the eight-hour barrier (at least on foot) there will now, no doubt, be more skiers who will take up the challenge.

Paddy Pallin sold 43 pairs of touring skis in 1965 and was inspired to run the first Australian Cross Country Ski Classic. But not in the relatively safe corridor between Smiggin Holes and the Chalet — he opted for a much more intrepid and potentially dangerous route starting at Round Mountain. There were six starters, Charles Derrick (who later perished near Mt Hotham), Ross Martin who still holds the Kosciusko summit record, Bob Maddison and the old trio of Robbie, Otto and Kore.



Ted Winter (left) and friends sheltering under the 'Bottle Tree' on the Broadway Spur, early 1950s. Above, 'living legend', Paddy Pallin. Winter collection and Hueneke

Kosciusko crossing record still stood at 16 hours, the time set by Reg Gelling and George Aalberg way back in the mid-1930s. Kore and Otto took up the challenge first, and in quick succession reduced it to 11 hours 12 minutes, ten hours 35 minutes and finally eight hours 40 minutes. On one of the first journeys they nearly perished in a foggy wooded valley off Mt Tabletop. Otto remembered sitting utterly exhausted against a tree trunk with a metal torch glued to his gloveless hand. Kore saved them by persevering with wet matches and wet snow gums to finally light a fire.

Conditions were much better in 1964 when Robbie Kilpinen swept across in eight hours 11 minutes. He had beautiful weather, deep hard-packed snow, the right wax on a pair of light wooden racing skis, excellent knowledge of the terrain and, after weeks of training at Grey Mare Hut, a very finely-tuned, almost lean, profile. No one has come near him on skis and only one person, Peter Treseder, has beaten his time on foot. In a magnificent solo marathon in February this year, Peter ran from the Perisher car-park along the Great Divide to historic Klandra in seven hours

In the seven and a half hours that it took them to reach Perisher, they experienced a big change in the weather (for the worse), the disappearance of Otto over a giant cornice, the withdrawal of Bob Maddison at Whites River because of cramps, a murderous crossing of the Rolling Grounds and a joint crossing of the finish line accompanied by the fanfare of Sverre Kaaten — an experienced master of ceremonies.

Paddy, who was born in Durham, England, in 1900 (yes, he's almost 84 years old), didn't take up bushwalking on skis until the early 1950s and completed his first Kiandra to Kosciusko crossing in 1956. He has since skied it three more times, in 1965, 1972 and 1977, and walked it twice, in 1956 and 1977. The 1972 journey was to make the widely-known film *Kosciusko — the Cruel Country*. His experience of the 1977 Commemorative Crossing (50 years after Schlink and Hughes) had a rather hilarious touch:

'There was a steep-sided little gully with open water, and as I skied along it the soft snow collapsed and in I went, face first, into a deep pool of water with my 30-pound pack resting on the back of my head. I struggled to get my face out of the water, but the soft snow offered no resistance to my pushes and I

dehydrated stew.

Gone were the days of a rare ski descent into Little Austria or a quiet week enjoying the creature comforts set up by the Whites River Hut Club (including a larder of food, a radio link with the Chalet and Antarctic-style sleeping bags), and gone was the time when you could canoe the Snowy without trace of human footprint, rubbish or fireplace. From the 1960s on, except for out-of-the-way places like a secluded untracked valley, the



Above, Snowies wombat. Middle, training partners (see story) Ross Martin (left) and Robbie Kilpinen on Mt Jagungal in 1964. Right, Ted Winter in 1978. Hueneke and, middle, Kilpinen collection

remember thinking, "What a way to die!" I got my head clear, but anyone who has had a fall in soft deep snow will realize my troubles were not over. My wrists were through the leather thongs of my stocks, a pack weighing 30 pounds was fastened to my shoulders, and my feet were secured firmly to six-foot skis. I somehow released my wrists, took off my pack and got into a sitting position to survey the situation. Was I actually sitting in water, or was it just cold snow I could feel? Whilst straining to reach my ski bindings to release my feet I broke wind — and had indisputable evidence that I was sitting in a pool of ice cold water. Then I saw the funny side and began to laugh!

The crossing from Kiandra to Kosciusko or vice versa is certainly a premier event for most bushwalkers and ski tourers, particularly because it is the only 100 kilometre journey in Australia that rarely descends below 1,600 metres (5,000 feet). But in a National park more than 200 kilometres long and up to 60 kilometres wide there are many other possibilities. One person who has explored more than the usual routes and who has written numerous articles on the early explorers is Alan Andrews.

In 1949 he made one of the first ski explorations of the frost plains north of Kiandra by skiing via Rules Point, Tom O'Rourke's Peak, Cave Creek, Pockets Hut, Mt Kimberli and Currango, and in 1952 he covered the country south of Dead Horse Gap as far as evocative places like Mt Leo, Adams Monument and Paddy Rushes Bogong. He has a passionate interest in the 'who climbed Kosciusko first?' controversy and is convinced that it was Count Strzelecki in 1840. 'It was on Mt Abbott that he left McArthur and from

there he proceeded on alone to ascend the summit and bestow upon it the name of the heroic patriot General Thaddeus Kosciuszko.'

Dr John Lhotsky, who some believe named Australia's highest point Mt King William the Fourth in 1834, only reached Mt Terrible, a few kilometres south of today's Thredbo. Andrews partly based this impression on a 1971 exploratory ski tour.

'The view from Mt Terrible is most commanding. Lhotsky's record of the scene from Mt William describes our picture — to the north-east the bendings of Napoleon Valley (the Mowamba), all to the west "immense accumulation of mountains", "SE side of the horizon, viz the opposite view, not so wild and a coast range (about Twofold Bay?) shutting up the horizon". To the south-west a "contiguous mountain... somewhat higher".'

Recorded in the clumsy and now archaic style of the last century, there is little doubt that Lhotsky was facing the turret-bedecked bulk of the Rams Head Range.

One much more adept at moulding the verbal vernacular is Ted Winter who, with 30 years of long-distance ski touring behind him, penned what has become a substantial contribution to our mountain poetry. Many of his tours started from the Khancoban side via Everards Spur and Pretty Plain, a route often used by stockmen like Ernie Boardman and Jack Armstrong and followed in 1935 by Tom Mitchell on the first ski tour to the Chalet. Ted was particularly captivated by a large knobbly snow gum called the Bottle Tree:

'"See you tomorrow at the bottle-tree", Ernie used to say, As we set off from Swampy Creek for Everards' on the way, And we sheltered in its hollow against the stinging blast, And waited snug and cosy till the pack-horses came at last. And dry it's kept the tucker which

our rucksacks could not hold, — The stories wove around that tree will never all be told — And sometimes to its branches we have lashed the skis, To rest another summer a-sighing in the breeze.'

Perhaps Ted's best and most graphic lines are found in *Dicky Cooper*:



'On the way it growls and gurgles Over boulders worn and bared, Twists and turns, and boils and bubbles

Though its song is seldom heard. Above rears its own bogong, Then it sweeps around its hut: Then north it tumbles, tumbles, As it cuts a deeper rut.

A road now skirts its valley, And a power-line as well, And bridges span its rapids As its murmurings plainly tell. Perhaps first, there was the bogong, And then the namesake creek, Then the hut was built by stockmen As new pastures they did seek.

But why the name? Why "Dicky Cooper"?

— Perhaps a famous man like Schlink?

No! Just a lowly "abo",

Whatever you might think,

Long departed with his fellows

From this range, which once they roamed,

an environment of sudden surprise and there are many stories of snowed-in cattle, frostbitten miners, disoriented bushwalkers, drowned fishermen, injured ice climbers and perished ski tourists. One of the most harrowing recorded tales is the death of Graeme Edenborough near the upside-down Cup on a Saucer in 1972. A companion recalled:

developed a special saw with a very stiff blade and large teeth like the snout of a sword fish. Others tried pruning saws, machetes, the ends of skis (not recommended), collapsible army spades, billy lids and, if all else failed, bare hands. The Kosciuszko Huts Association even introduced a competition for the best igloo.

Some of the ingredients for a successful igloo include a good supply of packed but not icy snow, an internal floor higher than the roof of the entrance tunnel, a smooth Gothic arch and a well-packed inside surface. Inside it is incredibly snug, silent and snow proof, and a single candle will bounce light off a thousand tiny



To our shame, they've dwindled,
dwindled,
And not Nature may be blamed.

Years — too brief to count in
hundreds —
Have changed this mighty land.
We've tamed its snow-fed rivers
To transform its desert sand.
But the mark on our escutcheon
Which we find hard to explain
Is the passing of the "abo";
And my heart is sore with pain.'

The high country is a quixotic place full of irony and paradox; while at one moment you can be as safe as a pigmy possum, the next you can be as exposed as the top station of the Crackenback chair lift. It is

'It was dark when Graeme started moving. He was punching me and moving his legs as if skiing. He moaned and cried "Help!", and "Greg" while I pleaded with him to stop moving, conserve heat, answer me sensibly. He gave a final moan and was still. I was stunned. The ice cave was too low for resuscitation.'

Events like this, and the growing problem of overcrowding at huts like Albina, Whites River and Mawsons, prompted skiers to experiment with building igloos and snow caves — for a few years one could almost tour from one icy tomb to another, at least on parts of the Main Range. A key exponent of snow manipulation was Pieter Arriens who



reflectors. When bedded in superdown on a ground sheet and two layers of closed cell foam it could almost be called luxurious. That is until it starts to rain or blow a warm westerly.

One man who didn't need an igloo, a snow saw or, for that matter, a pair of 'poo boots' (bivvy socks) was Geoff Mosley, the current Director of the Australian Conservation Foundation. He came to traverse the high country in summer, and traverse he did, in a 19-day marathon that started on the outskirts of Canberra on 14 November 1972 and ended below Mt Skene in Victoria about 470 kilometres later. He and his part-time companions walked for ten to 12 hours a day at an average of 25 kilometres a day.

This trip, partly done for the joy and the challenge and partly to advertise the embryonic Tri-State Trail, now stands out as a landmark in the history of long distance tiger walks. As Geoff relates, it was not without drama:

'I had suffered some stomach discomfort back at Glen Valley but as the day wore on things became much worse; the strength went from my legs and by the time I reached the Cope Saddle I was too weak even to put up the tent.

In between violent bouts of vomiting and diarrhoea, which were

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so bad at one stage that I felt as though I was dying, my thoughts began to turn to how I could get back to civilization. I knew that my route on the next day would take me to a road from which I might be able to obtain a lift. Although I was very keen at least to walk to Mt Hotham, the end of the second stage, I decided that if my health did not improve and I met a car I would finish the trip there and then.

The next day I was still sick and unable to eat, but I found that I could get up even the steepest hills if I walked for ten minutes and then rested for ten. After a while I settled down to this routine and in spite of my weakness began to enjoy the sensation of added risk which all solo walkers feel!

1972 is barely 12 years ago, less than the age of my oldest daughter, yet long enough to see enormous changes in the high country, changes not only in equipment and style but also in attitude, perception and management. Some things, like the Telemark revival, have come full circle and other things, like the Mountain Mule pack carried by Geoff Mosley, have come to a full stop.

The pack of today is aero-dynamic, body-clinging, comfortable and in colour almost punk; skis are light, narrow, waxless and fast; tents are storm-proof, rip-proof, mosquito-proof and fool-proof! Gore-Tex is in and oiled japa is out; carbon rods are the rage and aluminium

THE BRUMBY

● THE HIGH PLAINS OF SOUTHERN AUSTRALIA HAVE always conjured up phantoms in the moonless shadows of the snow gums; outside the comforting circle of the camp fire's warmth a vivid imagination often transgresses all reason.

A party had pitched tents at a narrowing of the plain close to the source of the Ingegoodbee, but it was not long before conversation was punctuated by rattling snorts. Initially dismissed as being produced by some sort of owl, they soon appeared to be coming steadily closer and more considered attention was unavoidable. When eventually identified as being made by a horse — a stallion in fact — the fire was stirred to greater brightness and voices rose to a more nervous pitch.

One walker protested to know horses well, but had no experience of brumbies. Certainly he had yarns to tell, such as of the racehorse that had shaken a strapper in its teeth like a dog shakes a rat. The smaller members of the party shuffled noticeably closer to the fire. Another tale involved a Clydesdale that was reduced to sausage meat by a brumby, and yet another concerned a wild stallion that bailed up two women riders, killing the gelded mount of one and servicing the mare of the other.

'What ya reckon we ought to do?' 'It's nothing to worry about.' But the reply rang hollow with the bravado of attempted self-assurance.

Strange, but any visitor to a haunted hut can verify how a seemingly tranquil night can offer a cacophony of not inconsequential sounds. It was getting late. Vapour was rising from the narrow stream as the mists thickened. Was that a movement there, beside the granite tor? Or there, just near the dead tree?

These experienced walkers reviewed their situation. Less than 400 metres away, but out of sight, was the hut where Charlie Carter had died. The tents in daylight had occupied the most lawn-like patch of the plain — and the narrowest. But close to them were all those hoof prints, not just leading to the water, but out the other side. There were two pads, one now completely blocked by a tent, the other with a guy rope across it. And all those mountains of horse manure directly behind the fire — monuments to a stallion's territoriality. The predicament suddenly became very bleak. The campsite could not have been better chosen by a military strategist. They were merely horses — but why weren't they timid like brumbies were meant to be? Elyne Mitchell hadn't mentioned anything like this.

The snorting came steadily closer. Increasingly nervous? Desperate? Did the campsite occupy the plain's sole watering place?

A neigh from the opposite direction, followed immediately by wild galloping through the

darkness, vaporized the punctured confidence of our camp-fire horseman.

'Come on. We're going to the hut. There's no knowing what he'll do next.'

'And the Nipper?'

'No. He's staying in his tent.'

'Hell! I don't want to be left here. But I can't leave me mate alone either, I'm staying.'

The other three grabbed sleeping bags and headed for the hut which, not five hours earlier, had been 'rat infested', 'dirty', and 'a lousy place to spend the night'. They departed with a degree of composure. Midway to the hut the prongs of torch-light criss-crossed more and more nervously. Then they disappeared behind a rise. Once again, there was a thundering of hooves in the mist. Later it was reported: 'My torch picked up the whites of his eyes'. They were red... 'There were two of them'.

Back at the tents there was concerned consultation.

'Do you reckon we ought to go?'

'You ever heard of horses hurting anyone?'

'No! But there was not much confidence in the response.'

Two hours earlier the images had been conjured in jocular bravado. But now, alone in their tents... (At least they won't need garbage bags for our bodies; they can use the tents we're trampled in!) Sleep offered the possibility of an easy death; they rushed into the protection of consciousness.

At five o'clock it was not yet quite light. The mists were still there. So, too, was a black stallion with a white flash, not 50 metres from the tents. He sniffed anxiously, pawed the ground. He approached. Behind him, and beyond the skeleton of the dead tree, seven mares filed off down the plain through the mist. The stallion turned and went with them.

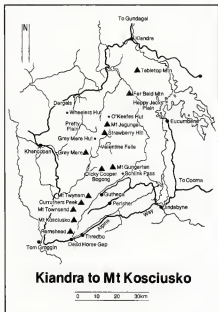
Of all the mornings of that walk, those in the hut chose this one to sleep in — by two hours. They returned to the campsite, spirits rising about as fast as the sun. Voices lost their unaccustomed high pitch, gained depth. Conversation was resumed with gusto. What had appeared, the night before, to be an ignominious retreat was hailed (by some) as an act of valour. 'It only Napoleon had had the courage to retreat from Moscow...'

Camp was broken and the trip continued. A Park ranger later offered an end to the tale. Our 'horseman' casually mentioned: 'Yeah, we were up near the Tin Mines. Had a bit of trouble with a stallion up there. Seems we were on his turf and, hem, he got a bit excited.'

'Yes, we know him. We're been around for quite a while.'

The ranger grinned, inscrutably. He knew more tales but wasn't going to tell.

'The Pope'



Kiandra to Mt Kosciuszko

is old hat; snow grass is out and self-inflating mattresses are in — where will it end?

The same goes for attitudes. An open fire, once the key mesmerizing ingredient for a night in the bush, is frowned upon and carrying your own high technology 'choofer' and expensive imported fuel is not. Camping around the glacial lakes is out, but replacing high elevation walking tracks with suspended steel mesh,

chemically-treated logs and concrete drainage aprons is in. And not to forget the huts, those poor misaligned and much abused shelters, so dotted on by some and so vehemently vanquished by others. Thank God, a latent appreciation of our heritage has at least saved a few, but not at the highest elevations where they really count.

Last but not least in this history of change is the growth in commercially-guided ski tours, bushwalks, horse rides, rafting trips, fishing jaunts, rock climbs and snow-shoe expeditions. Preceded in the 1920s and 1930s by little more than a mounted stockman guide, a pack-horse or two and a few paying guests (at one pound

a day), today's outfits are by comparison super-efficient, super-advertised, super-expensive and super-computer-controlled. In short, what was once a bonus for an extra pint at the old Jindabyne Pub is now a viable way of life.

In the process of this recreation revolution, several hundred more mortals have been inspired to extend their bodies, fill their aching lungs with crisp mountain air and embrace new horizons, to perhaps come back next year under their own steam and in their own gear. The history of the past 200 years suggests that even if everything else is transformed, the mountains will still be there. At least until the next Ice Age. ●

A full-page photograph of a dense tropical rainforest. In the foreground, a shallow river flows through the forest. Two people are crouched in the water, possibly fishing or examining something. The background is filled with tall trees and large, vibrant green ferns. Sunlight filters through the canopy, creating dappled light on the forest floor.

Daintree

This threatened
Queensland
rainforest is the
battleground for
Australia's biggest
conservation
fight; by

Gregg Borschmann.

● IN THE LATE 1950s, DR LEN WEBB AND Geoff Tracey crossed the Daintree River by barge to take their first close look at the rainforests further north.

They were travelling with Lindsay Smith, senior botanist from the Queensland Herbarium. Since the early 1950s Webb and Tracey had been engaged in what was the first attempt to ecologically study and classify the Australian rainforests. It was no easy task. For example, by 1975 when they published vegetation maps of the humid tropical region between Cooktown and Ingham, they identified 11 distinct rainforest types and a further six subtypes.

Previous work on these forests had been largely directed toward and dictated by the needs of the timber industry. Webb and Tracey, rather than looking at individual trees, how they grew in isolation or in a plantation, tried to understand them within the structure of the whole forest.

In 1962 they returned for their second trip north of the Daintree, this time camping for a couple of days in the Hutchinson Creek area, about 14 kilometres south of Cape Tribulation. They did some exploring, and marked out an experimental plot, or study site, on which they recorded tree species type and distribution. Geoff Tracey remembers: 'Every second plant we came across in there that first time was an undescribed species'.

In 1970 they camped at Noah Creek, set up more study plots, and found still more rare, primitive plants, many of them endemic (found only in this region).

Now acknowledged as one of the most important botanical sites in Australia, Noah Creek is an example of how little we know about the complex worlds here. Geoff Tracey: 'We know it's different but we don't know why. Hardly any work has been done there'.

Incredible as it may now seem, if you stand in the middle of Sturt's Stony Desert in the far south-west of Queensland, most scientists agree that this continent was totally covered by rainforest some time in the past 65 to 115 million years. But temperature and rainfall have since fluctuated, aridity has become more widespread, and more recently there has been the rigour of the Ice Ages. All this vastly reduced, or 'telescoped' as Dr Webb puts it, the places where the remnants of our ancient flora survive.

These rare relic plants — direct descendants of the first flowering plants currently dated as first appearing in Africa 127 million years ago — are now important clues to unravelling, to understanding, the evolution of the earth's angiosperm flora.

In a summary of the scientific values of the rainforests found in the Greater Daintree, produced last May for the Douglas Shire Council, Dr Webb wrote that the region 'provides one of the most compact and diverse assemblages of families of primitive flowering plants, and

associated biota, to be found anywhere in the world... The area is of crucial significance (providing) residues of the primitive stocks from which the bulk of the modern Australian flora has evolved. The area harbours some of the most ancient Australians that survive in the plant and animal kingdoms, and is therefore of profound interest to us all'.

Tragically, others with different interests in this land were not far behind Webb and Tracey. During the 1960s, much of the lowland country between the Daintree River and Cape Tribulation was converted from vacant Crown Land, leased to cattle graziers and cleared.

'morning noon and night, day after day after day... (the Daintree wilderness) should be there for all north Queenslanders, it should be there for people all around Australia, it should be there for everybody around the world. It should be there for the inhabitants of that wilderness, our fellow creatures on this planet who don't have a vote... If we don't have the humility to consider our fellow creatures in nature, be they trees, be they living in the trees, or on the forest floor, there is no hope for us as part of the realm of nature on this planet', Dr Brown said.

North of Cape Tribulation, the road being bulldozed north by the Douglas Shire



By the time the cattle business went bust in the early 1970s, certain businessmen were ready with cheque books to buy rural land at bargain-basement prices. Several thousand hectares of that land — including large chunks of the rarest rainforest type in the Australian wet tropics — has been, and is still being, subdivided into lots as small as one hectare.

I remember driving through some of this forest, the road an engineer's dream, blasted straight and wide. The mystery of the forest, its soul, had been battered. Dr Bob Brown, Tasmanian MLA and the man most identified in the fight to save the Franklin River, sat in the driver's seat, thinking about that forest. 'How much are these blocks?' he asked. 'Starting price \$20,000, or \$65 a week on "special vendor finance"'. There was a moment's silence as he mused on the tangle of life.

'Gee, I wish I was a millionaire!' He would, of course, buy this forest, every last block, not for himself, to possess, but to save, to preserve intact for all to own and cherish.

In a world losing tropical wilderness at the rate of 30 hectares every minute

Council has grabbed the headlines. The council talks of a four-wheel-drive track. Others fear perhaps one day a new coastal highway. In the wet season when four metres or more of rain can fall around Cape Tribulation, even a four-wheel-drive tractor wouldn't make it through some of the streams, and up some of the slopes.

Paul Mason, whose family moved to Cape Tribulation in 1934 to farm bananas, pineapples, tomatoes and later cleared the forest for timber and cattle grazing, remembers travelling that track when it was first blazed in 1968 by local real estate and sugar interests. Travelling in his Land Rover, he says it was a 'hair-raising ride. I remember on Point Donovan, sitting four people on the bonnet to get some traction on the front wheels because the thing was so steep'.

Wet season washaways and regrowth meant that before last December, when the bulldozers moved in again, bushwalkers were the only traffic.

This road has been a talked-about trail to a supposedly new El Dorado for decades. It apparently never occurred to the pioneer spirits in the 'deep north' that they could be destroying that El Dorado.

Creek in Daintree rainforest near Mt Lewis and, above, Cape Tribulation. Andrew Dennis and Steve Parish

Patches of God-Light

● THE FOLLY OUR DESCENDANTS ARE LEAST LIKELY to forgive, say the scientists, 'is the loss of genetic and species diversity by the extinction of natural habitats'. At stake is not simply deterioration, but the destruction of whole segments of God's creation. In two areas in particular — the extinction of species and the dismemberment of the wilderness — this damage can be irreversible.

The beauty of nature is a window through which the world sees the splendours of divine creation. In the Japanese religion of Shinto there are no deities — only phenomena which evoke in man's soul a feeling of reverence. A waterfall, Mt Fujiyama, a yawning chasm are regarded as Kami — gods. In Christian worship, prayer begins with adoration — the picturing of one of God's splendours which lift man's soul from the mundane to the magnificent. As Ruskin once pointed out, we have no right to deprive generations yet unborn of benefits it was in our power to bequeath — in other words we have no right, through our negligence, to deprive our descendants of the joys of nature.

Biblical passages illustrate with startling clarity in Job and the Psalms that the earth's creatures owe their existence to God; they know the creator, reflect his glory and subsist for his benefit, apart from any value they represent to humans. God in turn cares for his creation with a concern that is not merely collective. Noah's selection of the animals reveals that it extends to each distinctive thread of tapestry. 'Beasts and all cattle, creeping things and flying birds', in the words of the psalmist, are spiritual as well as ecological resources.

Norman Myers, author of *The Sinking Ark*, estimates that with the growth of technology between the years 1600 and 1900, an average of one species of birds or mammals disappeared every four years, compared with one every 1,000 years during earlier periods.

By the beginning of the twentieth century, human-induced extinctions had increased to one species every year. The final quarter of the century, says Myers, may usher in a biological debacle greater than all mass extinctions of the geological past put together.

Wilderness is being lost at a similar pace. During the 1930s Robert Marshall, founder of the Wilderness Society, said that wild country was

'disappearing like a snow peak melting in the hot sun'. If only as refuges for endangered species, our remaining islands of wilderness could be defended theologically. A more compelling reason lies in their value as faith-nurturing resources.

Throughout history, for the ancient Hebrews and Old Testament prophets, for the desert fathers and monastic orders, the wilderness has humbled visitors and deflated pride. In the clear, spare, lonely places contemporary sojourners continue to sense their limitations and dependence upon God. Wild country is not sacrosanct and not every hectare needs protection, but when so little wilderness remains to a nation, the contemplative gifts it offers, such as silence, solitude and a sense of awe, become valuable.

We need these sanctuaries of stillness to which we can withdraw to get our spiritual bearings. The desert and mountains remain for us as they were for Jesus, settings for silence and prayer. So far the Church has not sufficiently grasped the nature of the present ecological crisis, it has not understood how powerfully dehumanizing is man's wanton exploitation of his natural environment, nor has it appreciated the degree to which man-made ugliness and the fouling of natural beauty are corroding man's mind and spirit.

Devil Day, a Canadian author of a book on extinct species, recalls that what affected him most profoundly while doing his research was viewing actual relics of living creatures which once inhabited the earth: the auroch's horn, the pelt of the Bali tiger and the weathered rib cage of a Stellars sea cow. Suddenly, he writes, he was drawn into the reality of their vanished existence.

In his letter to the Romans, Paul wrote, 'Ever since the creation of the world his invisible nature, namely his eternal power and deity has been clearly perceived in the things he has made'. The Church sees nature as a window to God, but all parts of creation can provide, as CS Lewis once wrote, 'patches of God-light' in the woods of our experience, glimmerings of divine handwork that help us to gather our spiritual bearings.

Wilderness and the spectrum of species, no less than other facets of nature, point us in the direction of the creator. Rather heedlessly we are extinguishing those patches of God-light for those who will come after us. ●

Bishop Ian Shevill

zoology, entomology, genetic, archaeology etc) have only begun over the past few years. Consequently the biotic communities remain *terra incognita* for science, emphasizing the need for "conservation of the unknown".

How, for example, was anyone to know in the 1960s the promised coastal road would pass through, just north of Cape Tribulation, the very heart of one of the last remaining patches of our lushest, most complex, rare and endangered rainforest type — that found on the humid tropical lowlands. It is now estimated that no more than a couple of thousand hectares of this forest remains. What excuse do we have, then, to shred out 55 hectares for a road reserve when we now know how rare this forest is?

What excuse does the Queensland Premier, Sir Joh Bjelke-Petersen, give for allowing this intrusion?

After all, at the Second World Wilderness Congress held in Cairns in 1980, he promised, after what conservationists saw as six years of dallying, that the Cape Tribulation National Park would be created. He told his audience: 'The area provides a living museum of plant and animal species in what is one of the few remaining examples of undisturbed coastal rainforest in the world'.

Even more spectacular — unique within Australia and occurring rarely elsewhere — abutting this undisturbed coastal rainforest is, according to Dr John Veron, a principal research scientist at the Australian Institute of Marine Science in



Townsville, the largest set of fringing reefs on the eastern Australian seaboard. These reefs run between Snapper Island, just off the mouth of the Daintree River, north towards the Bloomfield River.

According to Dr Veron, one of the foremost authorities on corals in the Pacific Basin region: 'It is strange, extremely unexpected to have these two

Daintree denizens; green tree snake and, inset, giant tree frog. Dennis, Cliff and Dawn Frith

Times have changed. The pioneering days should really be banished forever.

As the Australian Conservation Foundation so clearly put it in June 1981, when presenting the Greater Daintree National Park proposal to the Queensland Premier, Sir Joh Bjelke-Petersen:

'Other parts of the northern rainforest region have had enough lowlands cleared for cane, swamps filled, hillsides stripped of their forest, giant old trees logged or burned and rivers and off-shore waters silted ... in a period where the "pioneer" approach is no longer necessary ... it is surely appropriate that the last, least disturbed natural corner of Australia's biologically rich wet tropics should be protected.'

Just how biologically rich we are only now beginning to discover. Up to 150 tree species can be found on a couple of hectares — more than the entire tree flora of either Europe or North America. Eleven species of frogs and 19 species of reptiles have been identified in the Greater

Daintree. At least seven species of vertebrate animal are endemic — four new species of frogs, the Thornton Peak melomys, the Bennetts tree-kangaroos and an undescribed species of skink (*Sphenomorphus* sp.). Eight species of freshwater fish have been found in the one waterhole of a rainforest stream.

According to George Heinschorn from James Cook University's Zoology Department and Peter Valentine from the Geography Department: 'The majority of rainforest animals species, for example most insects, worms and other invertebrates, haven't even yet been described and, except in the most general terms, their ways of life and their functions in the rainforest community are unknown'.

Dr Len Webb, formerly the senior principal research scientist in the CSIRO's Rainforest Ecology section (which has been disbanded since Dr Webb's departure a few years ago) says: 'Systematic studies of the (Greater Daintree) have begun only over the past ten years. More intensive collecting expeditions on a small scale (botany,



complex ecosystems existing side by side because normally the conditions required for the rainforest preclude fringing reef — that is what makes this Daintree coast such a special place'. (He can only think of two other places where tropical rainforest meets reef — on the Mergui archipelago of western-Thailand and off the north coast of Papua New Guinea.)

Put simply, rainforests need fresh water. Plenty of it. Corals will die if they get too much. Richard Kenchington, Executive Officer (Planning) with the Great Barrier Reef Marine Park Authority, says the fringing reefs have probably been able to develop here because the coastal range

University, walked over them once at low tide in 1975. Richard Kenchington looks like he may be the most familiar. But he has dived only twice for about an hour apiece off Noah Creek (on two other occasions the predominant southeasterlies made the water murky, preventing coral viewing).

The Douglas Shire is seriously proposing to build a road (estimated by the Council to cost up to \$2 million) through an area which Dr Geoff Mosley, the Director of the Australian Conservation Foundation, has described as the most important conservation site in Australia. At the same time, the Queensland National

placed on the Register of the Australian National Estate.

Frank Crome, who was engaged as a consultant by the Australian Heritage Commission to assess the area, said in his report: 'Its scientific, faunal, floristic and scenic value make it one of the great natural areas in our country... the current world concern about the remaining forested areas of the globe make the area of world significance... still relatively untouched... its integrity is high and this is an important component of its national and international significance'.

Realizing the inadequate nature of the 17,100 hectare Cape Tribulation National Park when it was finally declared seven years after Stanton's report (with some of Stanton's other Park proposals ignored), the Australian Conservation Foundation wrote to the Queensland Premier on 30 June 1981, forwarding the proposal for the Great Northern (now Greater Daintree) National Park. The boundaries approximated the area already registered on the National Estate.

The Greater Daintree is now the focus of the campaign to save all the wet tropical forests found between Cooktown and Townsville. In 1982 these rainforests were identified by the International Union for the Conservation of Nature and Natural Resources as 'one of the world's greatest natural sites'. The IUCN, which advises UNESCO on natural sites of World Heritage quality, placed the forests on its indicative list of World Heritage sites.

The Australian Heritage Commission and the Federal Government are considering a report commissioned from the Rainforest Conservation Society of Queensland on the World Heritage qualities of these forests.

Greg Adermann, Press Secretary to the Queensland Minister for Tourism, National Parks, Sport and the Arts, Mr McKechnie, when asked about the Queensland Government's attitude to the Greater Daintree National Park proposal replied: 'The problem with having these huge National Parks is management. You can only do so much with limited budgets and resources. On Cape York as elsewhere, one thing we are trying to avoid is having these large unmanaged Parks'.

It is a far cry from 1977 when the Bjelke-Petersen Government promised to create a Cape York Peninsula Wilderness. The plan was to declare the entire peninsula, north from a line between Normanton in the Gulf Country and Cairns on the east coast, as a protected wilderness and wildlife area. *The Brisbane Courier-Mail* of 15 August 1977 quoted the Premier: 'This proposal may take several lifetimes to complete. But the Queensland Government is starting now for future generations to see part of Australia in an untouched state'.

That promise has been either forgotten or abandoned. What better place to start, after all, than the Greater Daintree, our threatened 'crowning tropical jewel'? ●



The proposed Bloomfield-Cape Tribulation road will not be easy on the family sedan! Lloyd Harrington

is so close to the Coral Sea, resulting in a very short catchment area for the streams. In some places, waterfalls almost tumble into the ocean. These very same mountains have guaranteed this area its high rainfall — and protected in the refuge areas, or survival niches, the primitive angiosperms — Dr Webb calls them 'green dinosaurs'.

Dr Veron has found fringing reefs elsewhere to be amongst the most species-diverse of all coral reefs. He also describes fringing reefs generally as 'specialized ecosystems hanging on by their toes... if you muck around with the water flows and sediments you are going to wipe them out fairly easily'.

Despite this wonder, this spectacle — our rarest coral reefs sitting alongside our rarest rainforests — despite presumed fragility and the possibility of outstanding species diversity, as far as I can determine, these reefs have not been seriously studied recently by any marine scientists.

Professor David Copley, Associate Professor in Geography at James Cook

Parks and Wildlife Service, which is supposed to be looking after the area, cannot afford to appoint a full-time on-site ranger, or find the resources to produce and successfully implement a management plan for the Park!

In 1974, Peter Stanton, a biologist in what was then the National Parks branch of the Queensland Forestry Department, collaborated with other service officers to produce a report on the Greater Daintree (he called it then the Daintree-Cooktown region). Recommending at least five National Parks be created in the area, he wrote in his report: 'Nature has created a region superlatively rich in scenery and wildlife in a State where such regions are small and few. Apart from the Great Barrier Reef, it is the crowning jewel of all our natural wonders'.

In June 1980, the Second World Wilderness Congress recommended Greater Daintree not only for National Park status, but also for nomination to the United Nations Educational Scientific and Cultural Organization's Man and the Biosphere programme.

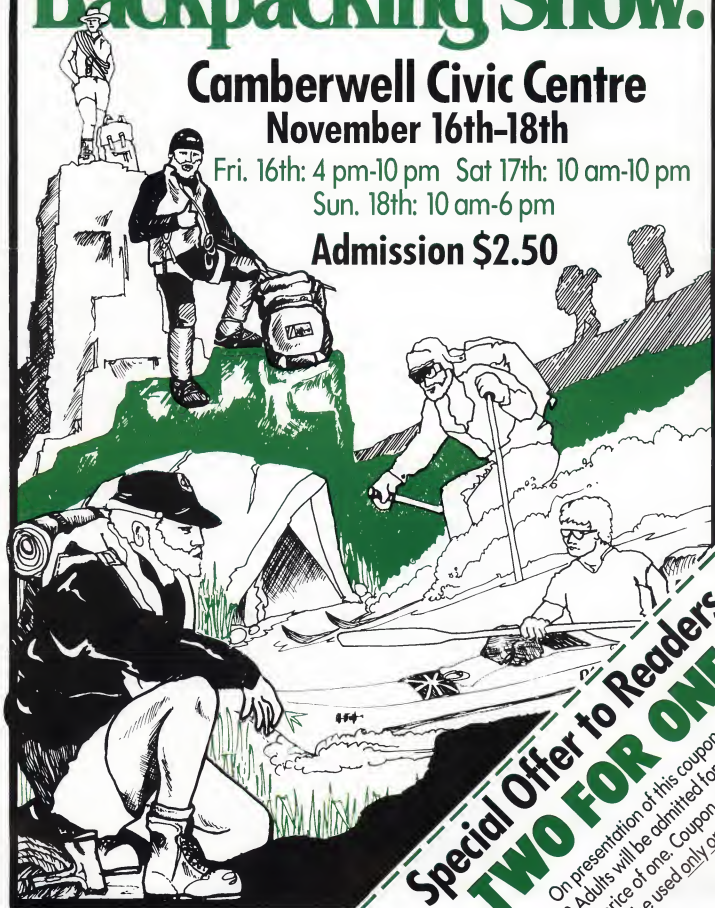
In October of the same year, the 350,000 hectare Greater Daintree was

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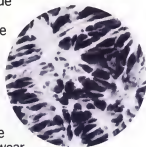
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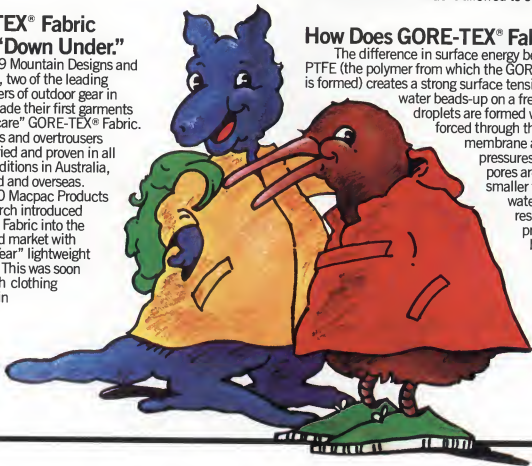
What is GORE-TEX® Fabric?

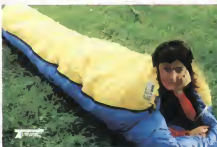
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Cliff and Dawn Frith

Purple-crowned
pigeon with young
and, right, tawny
frogmouth. All
photos are taken in
Queensland.



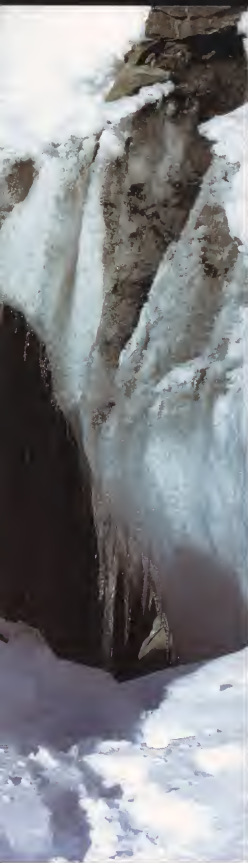


Masked plover at
the nest and, right,
no, not a *Wild* staff
meeting, but palm
cockatoos.





Ski



New ways to ski steeper and faster slopes, with *Glen Nash*.

● IN EUROPE WHEN SKIERS TALK OF ski touring, cross country skiing is usually the last thing they have on their minds. To Europeans, ski touring is a world of downhill-type skis, plastic boots, skins and avalanche beepers.

It's a somewhat different situation in Australia where heavyweight, wide, metal-edged Nordic touring skis and heavy Vibram-soled touring boots are all the rage. Add to these skis and boots the almost compulsory heel locators, and the new skinny skins, and you have what closely resembles the same rig as that used by European Alpine ski tourers.

The heavyweight Nordic/mountain touring ski has been quite popular for several seasons and there are many hardcore devotees who swear by this so-called 'lightweight' mountain touring gear. The main argument in favour of this equipment is that it is much lighter and simpler than the European Alpine touring equipment, and given our more gentle terrain, Nordic gear is far more suitable than its Alpine brother.

This argument may be true to a certain extent, but after the addition of all the extra weight necessary to 'soup up' the old langlauf ski and turn it into a steep ski, one still has loose heels and minimal safety. If you add a large pack it doesn't matter how 'hot' you are — you will still be straining to crank turns and get down the fall line in one piece. Style? No such thing!

While cross country skis will always be ideal for touring over long distances in our Australian Alps, the Alpine touring ski also has a place in our mountains. When the Nordic skier reaches his limits, and by limits I mean steep, deep and physical, this is where the Alpine skier takes off. The Alpine touring ski is ideal for skiing the steep gullies, headwalls and cornices that abound in our winter mountains, and spring corn plus Alpine touring skis equals heaven!

Alpine touring skis, bindings and boots,

Glen Nash on New Zealand's Tasman Glacier. Photos Nash collection

because of their downhill ski development background, are far more complex in their construction and design than their Nordic cousins, so a brief run-down is in order.

Skis. Alpine touring skis are generally used in much shorter lengths than Nordic skis and most manufacturers produce them in sizes ranging from around 165 centimetres to 195 centimetres in length. Their construction is based on downhill ski patterns incorporating the latest construction techniques and materials. Generally they are much softer than Nordic skis, with more pronounced side cut, which allows better carving and turning characteristics in deep off-piste snow. They are also designed to be of the lowest possible weight, an important characteristic in any touring ski.

Specialist Alpine touring skis also feature tip holes which enable a pair of skis to be lashed together to form a rescue sled in an emergency, and tall notches to facilitate easy fitting of climbing skins. A lot of Alpine touring skis also have brightly coloured decks and bases which could be a life saver in many mountain situations such as avalanches and white-outs.

The hard and fast rules for selecting the correct length of Nordic skis do not apply to Alpine touring skis. The only way for you to decide what length ski best suits your dimensions and capabilities is to go out and experiment with them. Nearly all ski manufacturers have an Alpine touring ski in their range, so selecting the right ski for your requirements should not be a problem.

Bindings. Of all the equipment used by wilderness skiers, the Alpine touring binding is the most complex item. There is, however, a good reason for this complexity, and that is safety. The modern Alpine touring binding must serve several functions; it must be easily locked down at the heel when skiing downhill so that the skier has full control of his boards, it must be possible to unlock it easily to free the heel when travelling on the flat or when climbing uphill with skins, and lastly, but

Mountaineering



A well-equipped ski mountaineer using climbing skins and self-arrest ski poles.

most importantly, it must release the skier's limbs when he has a potentially bone-breaking fall.

Over the last ten years touring bindings have undergone an incredible amount of development and refinement, with the result that they are now almost as safe and efficient as any downhill binding. There are many different types of touring bindings available but you will probably find the plate-type bindings to be the best. When selecting a binding it is always a good idea to make sure that the binding you intend using has at least a toe and heel release, or a two-way heel release as a bare minimum. Safety straps are also essential since a lost ski can lead to disaster in the wilderness.

Useful equipment featured on most good Alpine touring bindings are climbing plugs. These climbing plugs elevate the heels when climbing and take a lot of strain off muscles and tendons on long, steep slopes.

Boots. Only specialist plastic touring or downhill boots should be used for Alpine

touring as the bindings are designed to be used with such stiff-soled footwear.

Alpine touring boots look like downhill ski boots except that they usually have Vibram soles and a removable inner boot just like double climbing boots. They also take crampons without any problems. If you already possess conventional downhill ski boots it is quite possible to use these for short tours or, if they fit exceptionally well, you can use them for everything. Plastic lace-up climbing boots can also be used for alpine touring but it is possible you won't have as much control with these as you would with normal boots.

Poles. The ideal pole is one that can be adjusted according to the terrain being skied, but unfortunately most adjustable poles still seem to be a bit on the fragile side. The exception is the Ramer self-arrest pole which is fully adjustable, can be converted into a five metre avalanche probe and can be used as an ice axe in a self-arrest situation. Conventional downhill poles can also be used and are indeed preferred by many tourers.

Skins. Over the years there have been different types of skins available that use

various materials and attachment methods. However the conventional mohair glue-on skin is still the king. Many synthetic skins are available today but the mohair skin is still a much more efficient climber than the synthetic version.

The only problem with stick-on skins is that the glue must be renewed on a fairly regular basis and can sometimes be a messy job. It is also important to remember that skins won't stick on waxed skis so don't get them hot waxed!

Accessories. As on any wilderness ski tour all the skiers in the group must be properly clothed and equipped to endure the rigours of the winter mountains. All the essentials including map, compass, food, bivvy bag and shell clothing must be carried. To neglect these precautions could be very dangerous.

Technique. It would require several volumes to fully cover the intricacies of Alpine ski technique and there are many fine books available on the subject. I will not attempt to give a blow by blow account of skiing downhill, but there are several techniques that must be mastered before you grab your skis and head for the hills. Briefly, a skier must be capable of making the following turns in a variety of snow conditions; the snow-plough, kick turn, stem turn and basic parallel turns.

Other essential ski techniques that an Alpine ski tourer should master are side-slipping, side-stepping and self-arrest, which is an important technique if you find yourself hurtling out of control down a slope towards a cliff or crevasse lip!

It is also a good idea to spend time practising with the use of skins — putting them on, taking them off, climbing and striding with them — because it does take a while to get used to these furry beasts!

The transition from competent cross country skier to competent Alpine tourer is not an overly difficult one. A few lessons at a lift-served downhill resort should set you on the right path. Certainly cross country skiers with previous touring experience have the necessary survival skill and knowledge required for Alpine touring. Although downhill skiers may have excellent ski technique and ability, they usually lack the important training and experience that skilled ski tourers possess. This imbalance would have to be rectified before a skier who is familiar only with patrolled downhill ski resorts could venture further afield. Alternatively, downhill skiers can hire a ski guide to take them beyond the lift lines, or possibly take an organized instructional course in ski touring or ski mountaineering.

When the limitations of cross country skis and skiers have been achieved, a whole new horizon opens up for the Alpine ski tourer and ski mountaineer in what is truly skiing's fourth dimension — the skier is no longer bound by the limitations of frail cross country skis or ugly ski lifts. From Europe's famous Haute Route to New Zealand's glaciers and Kosciuszko's summit, the whole Alpine ski touring adventure is out there and waiting. ●

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● **WOMEN ARE MAKING INROADS ON YET another male-dominated sport — canoeing — in every aspect of which, from recreation to administration, their presence is being felt. They are ordinary women who have a sense of adventure, enjoy outdoor life and don't mind getting wet.**

Traditionally in canoeing, women have been the wives and girlfriends of the 'real' men who went out and did their thing on the rapids. They organized the car 'shuffle', kept the camp fire going, and generally waited around until the men returned, wet, weary and hungry. They were then expected to become ministering angels to these macho types. But all things change, and women are now taking a share of the action and the fun.

Most women canoeists are found in recreational touring. Whatever the standard or venue, it is likely these days that there will be women in the group. They carry their own gear, make their own decisions and are part of the team. In fact it is only the bulge under the buoyancy vest which indicates their sex. In competition, from slalom to down-river racing, there seems to be an increased commitment from women, a willingness to give whatever it may take to excel, to win.

Elizabeth Blencowe, a world-class sprint and down-river racer, is probably Australia's best-known woman canoeist. She is our number-one ranked paddler, male or female, and has proved herself in world competition, including her fifth place in the World Titles — the highest position of any competitor from a Western country. At the time of writing, Elizabeth is training hard for selection to the 1984 Olympic Games. Her training programme is arduous, and she has had to give up a number of activities not only because of time constraints, but because of fear of injury. All her energies are now focused on one event.

In the administration of the sport, at *Left*, Yvonne and Chris McLaughlin among the white stuff, Nymboida River, New South Wales. *Right*, giving it a go — a group of enthusiastic girls. McLaughlin collection

Federal, State and club level, a number of positions of power are occupied by women. Joan Morison, the Secretary-General of the Australian Canoe Federation, is a very able administrator and a pioneer amongst women canoeists. A former Australian ladies K2 sprint champion, Joan held her first administrative position in the late 1950s, when she was Secretary of the New South Wales Canoe Association. She remembers the fuss when she first wanted to enter marathon races in the 1950s, when there was a lot of antagonism and opposition from men. She laughs now at how a special meeting of the Canoe Association was convened. Advice was sought from the Crown Street Hospital in Sydney, as to whether it would affect 'women's health' if they were to enter such races.

Fortunately the myths have been dispelled and attitudes have changed

since then. Joan still paddles in marathon races, either C1 or mixed C2, and has paddled the Murray Marathon five times. But she says her greatest love is touring — real touring, carrying your gear in the boat, and camping out overnight.

Jane Farrance, the Chairperson of the Australian Board of Canoe Education has been canoeing for 18 years. A four times holder of the Australian ladies K1 championship and a Senior Canoe Instructor, Jane is very active in promoting the sport. She believes that community attitudes, such as 'canoeing is a sport for the men, dear', still inhibit many women from giving it a go.

At State level, women are on most committees and take an active role in decision making, but it is at club level, which is the backbone of recreational canoeing, that women are best represented. One of the biggest canoe



Paddling Their Own

Yvonne McLaughlin tells how women are leaving the campsite and heading for the river.

clubs in Victoria, the Victorian Canoe Club, has a female President and a female Vice-President, and is estimated to have the greatest number of active women paddlers of any club in Victoria.

Opportunities for trying out the sport are increasing. Hiring equipment is cheap and easy, and safe venues for beginners are widely publicized. Most States have canoeing guides to their rivers.

More schools are offering canoeing as part of their outdoor education programme, so more girls are getting exposure to the sport at an early age, and more women are becoming involved. Once they have had a go, an increasing

is good fun, and anyone can do it. It is skill, not strength, which is the most important factor in successful canoeing and good canoeists use their skill to harness the power of the water to achieve whatever they want. Women learn this quickly.

I once saw a woman paddle effortlessly across a fast-flowing river while her male companion, a big, strong-looking guy, exhausted himself fighting the current. The woman's light weight was an advantage but more importantly she was making use of the power of the water instead of trying to overcome it. Strength is not necessarily important, but stamina and endurance are. This is particularly so if a woman wants

follows basic safety precautions, is in a safer position than a pedestrian crossing a busy street. There will always be the unexpected, but that is part of the fun.

Canoe polo is attracting many women. This fast-moving game is good for developing quick reactions, a fact upon which many women comment and claim that polo has improved their performance when paddling on rivers. There are mixed teams and women's teams, and yes, the women often beat the men.

It has been found that women have greater endurance than men in long distance racing and they suffer less from the discomforts associated with this type of activity. Over the past few years, there has been a big increase in women marathon paddlers, so have a look at the finishers at the next Murray Marathon (a gruelling five-day paddle) and you will be surprised at what you see.

Women canoeists now tend to be younger, fitter and with a wide variety of skills gained through trying different aspects of the sport. Women often show men the way on trips and it has been said that, proportionately, the average woman canoeist has a higher level of skill than the average male canoeist.

Karen Prior, a Victorian paddler, took a path typical of the new breed of women canoeists. She started canoeing at 14, with her family, and quickly became interested in competitive paddling, her first big event being the Victorian Schools Championships, slalom K1. Having got the bug, Karen started paddling and training seriously and soon moved up to bigger events. With Stuart Dry, another young Victorian paddler, she paddled mixed C2 in the 1979 Australian Slalom Championships. In the same year, she competed in the Australian Down-river Race Championships.

During this time Karen was studying for university entrance, and also became a canoe instructor with the ACF. At the grand old age of 18, Karen left serious competition, and now is primarily a recreational canoeist. 'I got bored with competition, and find touring much more satisfying. I enjoy the challenge of teaching, and like helping others increase their skill and get more enjoyment from canoeing.'

Karen teaches canoeing through the Victorian Board of Canoe Education and is an active member of the Board. As well, she plays in a women's canoe polo team, and paddles most week-ends when there is good water.

Opinions differ on why it is good to have women in the group on canoeing trips — ranging from 'they are more likely to give you a hand when you capsize', to the unprintable! But just about every male canoeist I have spoken to agrees that it is more enjoyable with a mixed group.

Different sources put the ratio of men to women in canoeing as high as 65:35 and as low as 90:10. Women canoeists have come a long way, but there is some distance to cover yet! ●



The new breed of women canoeists; Mandy Linden in the 1983 Victorian Championships, King River and, right, Karen Prior. Reg Hatch and McLaughlin collection

number are staying in the sport.

Stereotyped images of women are disintegrating so far as sport is concerned, and more girls are moving into activities previously considered 'unsuitable'. They are proving gender doesn't count: it is things like enthusiasm, flexibility, and staying power which give results.

Canoeing is not a glamorous sport — it is impossible to look feminine in full canoeing gear! You frequently get wet, and sometimes feel cold and uncomfortable. But that doesn't matter — the girls agree it is a great way to have fun, tremendously satisfying, and that men have had it to themselves too long.

Canoeing has a macho image for which Burt Reynolds in the film *Deliverance*, back in the early 1970s, was in part responsible. To many people canoeing seems dangerous, requiring considerable strength and stamina. This can be daunting to women, and many are conned into thinking they don't have what it takes. This image, however, is a myth. Canoeing

to paddle white water, do long trips, or enter competitions.

Because of the fitness phenomenon, more women are exercising in the gym, aerobic classes or running, and this increase in overall fitness is paying dividends. Women realize there is no mystique in being fit, find that paddling is not hard and that they can last the distance. Most importantly, they are prepared psychologically; they are mentally alert, feel competent and have a healthy measure of self-confidence.

Women have paddled all the big white water rivers — the Franklin (Tasmania), the Nymboida (New South Wales), the Mitta Mitta (Victoria), the Barron (Queensland). They have proved they can handle the physical stress of the paddling and portaging, and the psychological pressure of being a long way from civilization and having to be self-reliant as well as a member of the team.

Every activity has its share of danger. In many outdoor sports that touch of the unknown is an additional attraction, whether or not it is admitted. A canoeist who is paddling on water within her capabilities, who has the correct gear and



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New Zealand Alps

● EACH SUMMER THOUSANDS OF AUSTRALIAN wilderness lovers head across the Tasman Sea for an energetic and inspiring holiday. They are rarely disappointed. New Zealand, particularly the South Island, is a treasure house of magnificent, unspoilt mountains rising from wild forest country.

The recent devaluation of the New Zealand dollar makes such a holiday doubly attractive for Australians. (At the time of writing \$A1.00 equals approximately \$NZ1.60!)

Many Australian visitors are bushwalkers of all levels of ability in search of exciting new walking in beautiful surroundings. They may walk one of the famous tracks such as the Milford, Hollyford or Routeburn. These tend to be spectacular, safe, well supplied with good huts and, at holiday times at least, crowded. There are, however, countless other possibilities. Some like the Rees-Dart walk, are equally spectacular, almost as straightforward, but less well known. Others are limited only by imagination. (See the article on New Zealand's west coast in *Wild* issue no 5.) Much of the information in this article, such as that about travel and accommodation, will be useful for our bushwalking readers or, indeed, anyone on a budget planning to visit New Zealand.

Increasing numbers of Australian walkers and rockclimbers decide to broaden their experience and skills by trying their hand at mountaineering in New Zealand. This is perhaps not surprising since New Zealand's mountains are both dramatic and beautiful. While the effort required to climb them is often considerable, the rewards can be great and are often clearly remembered long after the most recent bushwalk is a vague memory. This special article will be of particular value to anyone who wonders what mountaineering in New Zealand is really like.

The transition from bushwalking or rockclimbing to mountaineering is not easy and, in the past, has too often been a tragically unhappy one. Mountaineering will always be a relatively hazardous activity, but with appropriate knowledge, gear and instruction, the risks can be reduced and its supreme satisfaction made more accessible to 'ordinary bushwalkers'.

The information in this feature is believed to be correct at the time this issue goes to press but readers should check information for themselves before acting on it.

Getting there. Three airlines fly from Australia to Christchurch, New Zealand's usual entry point for mountaineers. Qantas and Air New Zealand both fly from Sydney, Melbourne and Brisbane. TAA and Air New Zealand fly the southern route from Hobart.

The economy return fare from Sydney to Christchurch is \$560. Most budget-conscious mountaineers would opt for APEF (Advance Purchase Excursion Fare). Return APEF fares to Christchurch are:

From	Off Peak	Shoulder	Peak
Sydney	\$320	\$382	\$438
Melbourne	\$352	\$420	\$482
Brisbane	\$362	\$430	\$494
Hobart	\$320	\$382	\$438

The date of outward journey determines the season: Shoulder 1 August to 9 December, Peak 10 December to 31 January, Shoulder 1 February to 31 May, Off Peak 1 June to 31 July.

Conditions of APEF: minimum stay six nights, maximum stay 120 days. Book at least 21 days before. You must pay within 14 days of booking and no later than 21 days before departure.

Climbing course above the Tasman Glacier, Mt Cook National Park. Gary Ball



Craig Nottle on the first ascent of the direct start to Heaven's Door, South Face of Mt Hicks, Mt Cook National Park and, right, at Empress Hut, below Mt Hicks. Mt La Perouse is on the right. (See Wild Information.) Rod Mackenzie

(Changing reservations can be expensive.)

A passport is now required to re-enter Australia. Allow plenty of time to obtain it.

Internal transport. Air travel is the quickest and most expensive. A one-way flight from Christchurch to Mt Cook costs \$NZ82.

The South Island is well covered by bus routes. Mt Cook Line runs daily from Christchurch to Mt Cook and Queenstown. Christchurch to Mt Cook is \$NZ24. A Kiwi Coach Pass is good if you plan a lot of travelling. It must be booked before leaving Australia; 7-, 10-, 15- and 25-day passes are available; 7-day pass \$A89.

Car hire rates vary between companies. The daily rental rates for a small car booked for three to seven consecutive days (unlimited kilometres) if booked from Australia is \$A35-40, or if booked in New Zealand, \$NZ45-55.

Hitch-hiking is the cheapest but the most unreliable way to travel. New Zealand is good for hitchhiking. However, remember that ice axes can rip upholstery, there are lots of other hitchhikers over summer, and there are some lonely stretches of road.

Accommodation. There is wide diversity in the standards and types of accommodation available.

Hotel and motel prices starting from about \$NZ25 a night for two persons go up to \$NZ120

a night for a suite at the famous Hermitage, Mt Cook.

Membership of the Youth Hostels Association is compulsory if you wish to stay in a hostel. Hostel fees vary from \$NZ4-6 a night. They have dormitories and communal kitchens and bathrooms. It is best to book in advance during peak season.

Motor camps vary from Australian caravan parks in that most motor camps have cabins and communal kitchens as well as tent and caravan sites. Mt Cook has a camping ground with basic facilities only.

There are National Park Board and mountaineering club huts throughout climbing and alpine walking areas. The huts in Mt Cook and Westland National Parks have two-way radios, stores and cooking equipment, but those in other areas are often more basic. Membership of mountaineering clubs may entitle you to reduced fees. Also, some clubs have base huts at climbing centres. These can be quite large and well equipped. (For example, the New Zealand Alpine Club's Unwin Hut at Mt Cook.)

Why do a course? For a bushwalker or rockclimber, the mountains and glaciers of New Zealand are unknown quantities. Avalanches, crevasses, rock fall, fast rivers and notorious weather are all hazards which have to be negotiated if you are to enjoy the marvellous New Zealand alpine environment. It is not only the hazards — one must also learn how to climb and live with that cold white stuff.

Doing a course is a good and quick way to learn about these things and gain from the

experience of some very knowledgeable instructors.

Private guiding. There are alternatives to going on a formal course. By hiring a guide with a small group of friends for a number of days it is possible to get the same amount of instruction as you would on a course. The advantages are that you choose your companions and have a much greater say in what you do and learn. Alternatively, you can climb with a guide in the traditional manner, with the guide's experience and expertise making up for the client's lack of it.

The advantages of a course are that you can meet new friends and climbing partners. If hiring a guide, there may be many extra costs. The client bears all expenses for the guide as they occur. These include food, hut fees, plane flights into high huts and other travelling expenses.

Weather. As already mentioned, the New Zealand alpine weather is notorious. Our best advice is to take plenty of good reading matter to make sitting out the storms more enjoyable.

The weather patterns are similar to those of southern Australia. The main difference is that a north-west wind, which is usually dry and hot in Australia, is warm and very wet in the New Zealand mountains. Snowfalls usually occur with south-west winds. Because New Zealand's South Island lies across the prevailing winds, the 'Roaring Forties', strong westerly winds are a problem.

Despite all this, there is usually more than one prolonged fine spell each summer!

When to go. The summer climbing season is generally accepted as being from December to March although it is possible to climb outside this period. Christmas/New Year is the busiest time. Early in the season snow routes are often in better condition but there is a greater avalanche danger. Late in the season rock routes are often better, but access can be a problem as snow melts and crevasses open up. Weather can be better later in summer but this is not always the case.

Clubs. The New Zealand Alpine Club is a good club to join for people wanting to climb in New Zealand. Membership requirements have recently been relaxed, although an ability to prove interest in mountains is still a prerequisite.

Addresses of Australian sections are Southern Section, GPO Box 1432M, Melbourne, Victoria 3001; Northern Section, PO Box A38, Sydney South, New South Wales 2000.

The Australian Alpine Climbers Club is also worth while for keen climbers, but benefits in New Zealand are less tangible. Its address is c/o Michael Rheinberger, 51 Park Drive, Parkville, Victoria 3052.

Preparation. Personal fitness and confidence are fundamental to the enjoyment and safety of most outdoor activities. Mountaineering is especially demanding, physically and psychologically.

An active and healthy lifestyle is the obvious path to fitness. For many, mountaineering will be a natural development of their bushwalking and rockclimbing, but special preparation for a mountaineering trip is important. Activities that develop stamina, such as extended walking and regular jogging, will be helpful. A week's walking in New Zealand prior to a course is recommended.

It is difficult to appreciate from postcards and books the awesome scale and overwhelming atmosphere of an alpine landscape. Simultaneously beautiful and frightening, mountains must be approached with well-founded confidence and caution. Enthusiastic reading, detailed planning and talking with experienced alpine climbers will help.

Regular rockclimbing with your future mountaineering partner is a good way of developing a mutual rapport at the same time as efficient rope management and belaying techniques.

Clothing and equipment. New Zealand is wet. A suitable windproof and waterproof jacket is a must. Make sure it's long enough to cover your thighs, baggy enough to wear warm underclothes underneath, does not leak and has a hood big enough to fit over your helmet. A double zip will allow extra leg movement when climbing and easy access to your harness when tying on to a rope.

Overpants are also essential, both as a waterproof and, more importantly, as protection against cold wind. Make sure you can get them on and off without removing boots and/or crampons.

The extremities of your body must be well looked-after; hands and feet get very cold without proper care. Gloves are easier to wear than mitts, but not as warm. *Dachstein* mitts are good but need some form of waterproof overmitts. An alternative is *Gore-Tex* covered, pile-lined gauntlets. Make sure they will keep the snow out, have some form of wrist closure and, if possible, reinforced palms. A pair of light thermal or wool gloves is handy when it is too warm for mitts. Remember that mitts must have small loop cords so that they cannot be dropped. Most manufacturers do not include these loops, so it is up to you to make them. Three millimetre stretch cord is best.

Plastic mountaineering boots have become commonplace over the last few years, and with good reason. As well as being light, hardwearing and warm, they don't absorb water. This is a great help during multi-day outings when leather boots would freeze after becoming waterlogged. Plastic boots come in a variety of models in both single and double versions; the latter are handy for bivouacs when you can keep your feet warm by wearing the inner inside the sleeping bag. Buy a good strong pair of gaiters. (*Cordura* or canvas is best.) Avoid zips; Velcro and press studs are easier to use and less prone to failure.

Most climbers climb in a pair of long johns with a pair of shorts on top, an unlikely combination that perfectly suits New Zealand's warm daytime temperatures. The synthetic underwear now available is better than the traditional wool as it doesn't absorb as much moisture and passes perspiration away from the surface of the skin. A good idea is to have a thermal underwear top to match, such as the *Helly-Hansen* Lifa, which is not too thick to wear on its own during the hotter part of the day. Long sleeves and a neck scarf are important for protection from sunburn; if necessary the scarf can be worn over your nose and mouth. Always carry a warm top such as a *libreille* jacket. It is handy if it has a windproof covering, but otherwise can be combined with your rain jacket. Another consideration with a pile jacket is its collar; a good large one can be zipped up at the neck to keep the cold out.

Despite the discomfort, a strong lightweight helmet should be worn. It will help protect you from falling ice and rocks and can be helpful if you have a fall. The helmet should have a simple and efficient strapping system and the size adjustable to accept a *Balaclava* or hat. The *Balaclava* must be long enough to tuck into your jacket, and it is useful if it can be rolled up into a bannet.

Sunburn and eye damage are serious hazards in the snow and at higher altitudes, so it is very important to carry two pairs of sun glasses when climbing. Glacier goggles/glasses should have an elastic strap to keep them from falling off, and side shields to cut out any bright



Hicks

● RING, RING, RING

It'll stop soon. Oh damn it, I was enjoying that dream. I'd forgotten about the alarm clock. I'd set it last night hoping the weather would improve — like remembering to put out the garbage — wonder what it's like outside — probably lousy. Roddy hasn't moved; what an amazing sleeper. Best get up!

Outside it's clear. Stars everywhere and it's cold, cold, cold. Cook's vast bulk keeps us in a moon shadow, but our objective — the South Face of Mt Hicks — is glittering with a new mantle of ice. We start moving.

'Have a guess how cold it is Craig?'

'Negative 8?'

'Negative 8?'

Of all the huts in the Mt Cook region, Empress Hut is the best. It has the best position, the best climbs and a positive feeling.

'How cold is it now Craig?'

'Negative 10?'

'Negative 12?'

'My toes could have told you that. Do you think that thermometer works?'

At the base of the face the temperature was negative 15, but that didn't matter because my toes were warm. In front of us was something we'd seen only in pictures of Scotland: the whole face was absolutely plastered in ice. Tenuous, ephemeral ice lines had appeared after the last storm and the climbing looked exciting. We discarded our original choice of route and started up another.

Thirty minutes later this didn't seem like such a good idea after all. The ice was there, but on placing an ice tool it shattered away, leaving me with some wonderful ankle-snapping ground-fall possibilities. I placed a piolet, lowered off and we returned to our original choice, the Central Gullies. This was easy in comparison. The ice was in good condition and we soon established a rhythm. It was 9 am when we got to the top of the second pitch. The sun was just peering into the Sheila Glacier basin. Above us its touch melted ice fragments free. Below us its rays caught the irregularities of the glacier. Close by, the Sheila Face of Mt Cook gleamed in sunlight, shedding its icy veil.

We knew the weather would worsen. Bands of cloud were forming on the horizon, but these were left undiscussed. A mixture of cloud and sunshine prevailed for another three hours. At belay stances showers of spindrift would cover us then melt in the sun. As yet there was no wind. The weather seemed undecided on storming or not. But on the summit the sunshine left us. Visibility was down to 15 metres and it was really storming.

One of the problems with mountaineering is that you have to get down. Our descent was complicated so I divided it into a number of objectives, the summit ridge, abseils in the couloir, abseils on the rock rib, the snow slope to the saddle and, finally, the glacier.

The couloir was amazing. Our crampons scraped about on the rock-hard water ice which covered everything. Abseil anchors were difficult to find and there was a feeling of insecurity. The mountain wanted nothing to do with us. From the couloir we moved on to the rib and received the wind's full force. Extra care was required for each movement. Darkness had arrived and it was snowing heavily. But in spite of it all there was a feeling of control. I was enjoying myself.

Beyond the rib lay the snow slope. Roddy's headlamp faltered and our pace was reduced. The rope between us was kept tight and we reached the saddle without incident. Below this the snow slope passed easily and we abseiled over the bergshroud to the glacier.

Down on the glacier the real fun began. The hut was only 800 metres away, but it took 45 minutes to reach it. We couldn't see it and our sense of direction was baffled by confusing stimuli. We were blown over by the wind. Snow coming straight into our eyes inhibited our vision. And snow swirling across the surface of the glacier hid any gradient. It was a curious feeling. We continued on, hoping for a landmark or a break in the wind to enable us to see the hut. Finally a break came — we sighted the rock outcrop and the outline of the hut.

In the hut the tension left us, but questions remained. Why had I enjoyed the descent more than the climb and how dangerous was it really? ●

Craig Nottle



Mountaineering course crevasse rescue practice Ball

peripheral light. Make sure the lenses are good quality and preferably not of glass — plastic lenses are much safer in the event of a fall or breakage. Some models come with a handy detachable nose piece which gives the nose excellent protection against sunburn.

Many sun protection creams are available so choose a good one. A high protection factor of 15 is the way to go. Apply it regularly and don't forget the backs of hands, neck and ears. Lips should have a special lip protection cream.

A wide selection of ice axes and hammers is available. It is most important to understand the difference between them if you are to choose the right one.

The steeper the incline of the pick of the axe, the steeper the angle of the ice it was designed to be placed in. If as a beginner you do nothing more than glacier walks and easy ridge climbs, an axe that has little pick drop will be the most practicable. A relatively straight pick is easier to use whilst self-arresting on a sliding fall: a model with a curved pick can have a tendency to rip out of ones hands. Axes such as Vulcans, Terrorclimbs, Chacals and Hummingbirds were designed for very steep ice and have only limited use. A good compromise is to choose one of the medium curved axes such as the classic Chouinard Zero design, the Cassin or Camp models or the Clog Condor. The amount of teeth that are cut into the pick is a matter of personal choice. Many prefer teeth for the full length of the pick. Without teeth, the axe will

have substantially less holding power.

Shaft length may not be important in itself: it is more important that you know how to use the length you choose. The shorter the shaft, the easier it will be to use on steeper ice. The longer axes are definitely awkward to handle on steep climbs but are preferable on the approach walks and easier climbs. Remember that your height is important in determining the ice axe length. Since much of your climbing will not be very technical it may be better to opt on the long side — 60-70 centimetres — and forget extremely drooped picks for your first season.

There are several ways of connecting yourself to the axe. Steeper climbs require a wrist loop of 1.25 centimetre nylon webbing so that your weight can be comfortably taken directly on your arms and not on your fingers. Some climbers still connect the axe to their harness by a sling, but this method is cumbersome as the slings tend to get in the way.

Make sure that the loops are correctly tied on to the axe and are sufficiently adjustable to cater for thick mitts. Some axes have a sliding metal camming device that is connected to the wrist and can be adjusted quickly and easily.

Make sure that the shaft is suitably insulated, particularly if it is metal. The grip, however, must not prevent the axe shaft from being plunged into hard snow.

Although usually shorter, the hammer is otherwise similar to the axe. Instead of an axe which is used for cutting steps or ledges, the hammer head is used to place pitons, ice screws and stakes. It is particularly important

to choose a hammer with a spike on the end of the shaft so that, if the axe is lost, you will be able to descend by using the hammer. Without the spike in such a situation, the hammer would be almost useless.

There are two types of crampons, hinged models and rigid models. Hinged crampons are for use on any boot, but are best on leather boots with flexible soles when they make walking far more comfortable than do the rigid type. It is never wise to use a rigid crampon on a flexible boot because the stress caused to the crampon can cause it to break. Rigid crampons are now used in conjunction with plastic no-flex boots.

With this rigid system, the problem of the balling-up of snow between the points of the crampons is greater. If not attended to promptly this can, of course, cause a slip, and a sharp tap on the side of each boot with the axe is the usual way of removing the snow. Rigid crampons, despite these problems, have better support and penetration on steep ice. Take note of the way the front points are angled. Some may be curved and others straight. The curved ones are probably slightly better on ice and the straight ones slightly better on rock. What's more important is the length of these points. Short front points are to be avoided considering the softness of the ice present during the usual New Zealand season. The longer points will have deeper penetration and holding power. Straps are very important: it is no good having the best crampons if they are going to fall off. There are many types of straps, but at present the neoprene and buckle system seems to be the most reliable. Whichever you choose, make sure to keep an eye on the wear of the straps and on any slippage that may occur. Always keep your points sharp and remember to carry any spare parts that may be necessary.

A single 50 metre rope is usually carried on most climbs. If the climb is long and technical, two ropes are often used so that if an abseil retreat is necessary it can be accomplished with more speed and safety than would have been possible had only one rope been available. A rope of 8.8 or nine millimetres in diameter is favoured for snow or ice climbing where the risk of cutting is not high and other elements in the 'belay chain' are likely to fall long before a rope of this diameter breaks. A larger rope will be too heavy. If possible, choose a water-repellent type of rope which will absorb less water and thus reduce problems of freezing and weight. If rockclimbing is expected, two ropes should be used.

Each climber in the party should carry a snow stake. The usual length is about 60-70 centimetres of wallied alloy angle. It should have a reinforced top to prevent deformation of the stake by hammering. There should be a number of holes capable of accepting karabiners down each side. (These, of course, can be added by you.) These holes enable the stake to be clipped lower down its length in shallow ice and it is also good to be able to clip the stake at its middle point when carrying it, and for buried horizontal stake belays.

There is a bewildering array of ice screws on the market but recent overseas surveys have shown many popular models to be less than satisfactory with regard to their holding power in ice. The better screws still tend to be the screw-in screw-out type, such as the Chouinard model, or the drive-in screw-out Lowe Snags. The length of the screws vary and it is hard to judge what will be needed on a particular climb. Generally, easier routes require longer screws and harder ones tend to require shorter screws. A good general length ice screw is 20 or 25 centimetres. Depending on the route, carry

New Zealand Mountaineering Courses - Summer 1984-85

Course	Course designed for	Course venue	Starting dates	Maximum number of pupils	Maximum instructor pupil ratio	Duration (days)	Nights indoors (incl huts)	Deposit (\$NZ)	Withdrawal conditions	Price (\$NZ)
Alpine Guides (Mt Cook) Ltd , PO Box 20 Mt Cook, phone Mt Cook 834 (Manager: Bryan Carter)										
Alpine introduction — Trekking. To develop skills for safe and efficient climbing. Emphasis on enjoying the mountain environment	Bushwalker or skier wishing to enjoy mountains without stress or strain	Mt Cook National Park	2 Dec, 10 Feb 17 March	12	1:6	6	3-4	\$100	Less than 2 weeks - no refund. 2-4 weeks - \$75 fee. 4 weeks or more - \$50 fee	\$495 \$495
Alpine introduction — Technical. To develop skills for safe and efficient climbing. Emphasis on preparation for serious mountaineering.	Bushwalker or skier wishing to develop skills necessary for serious mountaineering	Mt Cook National Park	11 Nov, 16 Dec, 6, 20 Jan, 12 March	12	1:6	8	3-4	\$100	As above	\$895
Technical Mountaineering. To teach the skills necessary for high alpine climbing and survival. Includes expedition to practice skills	Bushwalker or climber intending to seriously pursue alpine climbing	Mt Cook National Park	10, 25 Nov, 1, 8, 26 Dec, 13, 27 Jan, 3, 24 Feb, 16 March	12	1:6	6	2-3	\$100	As above	\$895
Classic Alpine Routes. To develop existing climbing skills and judgement on ascents of classic 3,000 m peaks	Person with some rock and snow climbing wishing to extend skills	Mt Cook National Park	9, 12, 29 Dec, 16, 23 Feb	6	1:3	8	5-6	\$100	As above	\$970
Wilderness Expedition. To develop mountain travel and survival skills in wild and remote places	Climbers wishing to extend capabilities	Mt Cook and Westland National Parks	7 Jan	4	1:4	8	na	\$100	As above	\$750
Alpine Rock. To apply modern rock-climbing techniques to alpine situations	Climbers with sound rock or alpine experience wishing to extend skills	Mt Cook National Park	23 Feb	6	1:3	8	4-6	\$100	As above	\$870
Alpine Rock — Advanced. To enable experienced rockclimbers to transfer skills rapidly to alpine climbing	Experienced rockclimber	Mt Cook National Park	na	4	1:4	14	9	\$100	As above	\$1,095
Darrens Rock. For crag climbers who wish to extend technical skills into the mountains	Experienced rockclimber	Mt Cook and Fordland National Parks	10 March	na	1:2	9	7	\$100	As above	\$995
Alpine Guides (Westland) Ltd , PO Box 36 Fox Glacier, phone Fox Glacier 825 (Manager: Mike Browne)										
Mountain introduction. To teach basic mountaineering techniques. Emphasis on attitude and assessment of conditions	Fit novice	Fox and Franz Neves	na	8	1:4	5	2	\$100	Less than 4 weeks - \$75. 4 weeks or more - \$50 fee	\$396
Wilderness Expedition. To build up confidence in travelling in remote areas	Climber with a sound experience of basic mountaineering wishing to extend ability	Douglas Neve or Landsborough or Spencer Valleys	na	6	1:3	10	0	\$100	As above	\$658
Alpine Recreation Centenary , PO Box 75 Lake Tekapo, phone (05056) 736 (Director: Gottlieb Braun-Elwert)										
Basic Climbing Instruction. Introduction to mountaineering, teaching basic techniques for independent climbing.	Bushwalker who wishes to reach beyond the bush line	Hopkins Valley	15 Dec, 6 Jan, 9 Feb, 9 March	6	1:6	8	0	\$303	Less than 30 days - \$303 fee. 30 days or more - \$40 fee	\$606
Mountain Guides New Zealand , PO Box 93 Twizel, phone Twizel 737 (Directors: Gary Ball, Nick Banks, Russell Brios)										
Mountaineering. To make participants self-sufficient in New Zealand's mountains	Fit, keen person with no climbing experience	Hopkins Valley	15 Dec, 11 Jan, 4 Feb	6	1:6	8	3-4	\$100	Loss of deposit	\$525
Alpine Climbing. To teach the most advanced alpine climbing techniques on major alpine routes	Fit person with plenty of personal drive	Central Southern Alps. Depends on members' preference.	26 Dec, 20 Jan	6	1:3	14	10	\$100	Loss of deposit	\$1,250
Mountain Recreation, Professional Mountaineers , PO Box 204 Wanaka, phone Wanaka 7330 (Director: Geoff Wayatt)										
General Mountaineering. To introduce the skills and attitudes required for climbing in the Southern Alps	Bushwalker, ski tourist or very fit outdoors person	Mt Aspiring National Park	17 Dec, 6, 28 Jan, 7, 17 Feb	na	1:6	8	0	\$50	Less than 40 days - \$30 fee if replacement found otherwise no refund. 40 days or more - \$20 fee.	\$495
Alpine Skills. To provide skills for efficient alpine peak climbing in the Southern Alps	Experienced bushwalker and rockclimber	Mt Aspiring National Park	27 Nov, 7, 17, 27 Dec, 6, 16, 28 Jan, 7, 17 Feb	na	1:6	8	0	\$50	As above	\$495
Advanced ice Climbing. To develop realistic confidence and capability on difficult and arduous alpine ascents	Fit, rock and alpine climber wishing to sharpen techniques or lesser climber wishing to develop competence	Mt Aspiring National Park	27 Dec	na	1:6	8	0	\$50	As above	\$495
Summer Glacier Ski Camp. To learn glacier travel and ski high peaks and glaciers. Includes one helicopter lift	Strong skier who wished the season hadn't finished.	Mt Aspiring National Park	27 Nov	na	1:6	6	5	\$50	As above	\$570
Treks Alpine Expedition. To travel through seldom-visited alpine areas and refresh skills	Climber with moderate alpine experience	Mt Aspiring National Park	16 Jan	na	1:6	8	1-2	\$50	As above	\$495

New Zealand Mountain Guiding Services

Total guiding fee (\$NZ) per day	1 client	2 clients	3 clients	4 clients	5 clients	Extra for food (\$NZ) per client/day	Deposit	Withdrawal conditions	Area guided
Alpine Guides (Mt Cook) Ltd	\$145	\$150	\$150	\$180	\$200	\$25	\$100	As for courses	Mt Cook National Park
Alpine Guides (Westland) Ltd	\$132	\$132	\$132	\$132	\$132	\$18	\$100	As for courses	Westland or Mt Cook National Parks
Alpine Recreation Centenary	\$125	\$125	\$125	\$125	\$125	\$25	50%	As for courses	By arrangement
Max Dorflicher , 40 Church Street, Rietfontein Phone Rietfontein 560	\$90	\$90	\$90	\$90	\$90	By arrangement	na	na	Preferably Westland National Park
Mountain Guides New Zealand	\$150	\$170	\$200	\$250	\$300	\$25	\$100/client	As for courses	Throughout New Zealand Alps

na information not available

experience



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FOR WARMTH IN A WILDERNESS

about six screws for a party of two.

It is a good idea to carry a few pitons on the rack or in your pack. A couple of thin blades, a Lost Arrow or two and a couple of small angles can be very handy.

Unless the climbing is hard, a lot of gear will be unnecessary. A general rack comprises a few mixed nuts in the smaller sizes, a few wires and a selection of three or four Friends. Twelve or 15 karabiners will complete the rack. It is a good idea to have at least one long sling that is carried double and can be used on big blocks.

Your harnesses must be comfortable (and light) and able to be put on without having to remove boots and/or crampons. Gear loops are handy. Don't forget to carry a good head torch with spare globes and alkaline batteries. Head torches are needed for most climbs and are notorious for failing when you need them most. Hammer holsters can be placed either on the pack (within reach) or on the harness. The hammer has to be quite short if it is not to get in the way when worn on the harness.

Prussik loops are essential. You must have ones suited to you and know how to use them. In crevassed terrain they should be in place on the rope and at all other times within ready reach. Mechanical devices are easier to use but too heavy for New Zealand mountaineering.

A Sticht plate, or similar device, which can be used for belaying and abseiling, is a good idea. It must, of course, be used with a screw-gate karabiner.

Frameless or, preferably, robust and waterproof internal-frame packs are more suitable than packs with external frames.

Remember to try to keep your equipment to a minimum when out on the hill. However, don't go overboard and take too little! Try to judge what you will need to make things enjoyable for yourself and at the same time, safe. Complete equipment lists are provided by each mountaineering school. Be guided by informed local advice.

Main climbing areas. Mt Cook National Park holds pride of place having most of New Zealand's highest peaks. Heavily glaciated, it has little greenery and a lot of glacial debris, but good access to both easy and hard climbs.

On the west side of the Divide is Mt Cook National Park's twin, Westland National Park. Rising from near sea level to more than 3,300

metres, its attractions include both lowland forest and huge neves feeding fast-flowing glaciers. It is serviced by the towns of Franz Joseph and Fox Glacier.

Mt Aspiring National Park, although not as high as Mt Cook and Westland, is very popular. Its beautiful bush-filled valleys offer varied walking while Mt Aspiring and other peaks have interesting climbing in a more remote setting. The best access is from Wanaka.

The rugged and steep Darrans are further south in Fiordland National Park. They have hard rock routes as well as some snow climbs.

Arthurs Pass National Park, while having only limited climbing potential, is a good place to get fit as it has good walking and good access from Christchurch by train.

There are other areas than those described here, in both the North and South Islands, but space limits their inclusion.

Further reading. *The Mount Cook*

Guidebook by Hugh Logan, published in 1982, now includes climbs west of the Divide as well as those in Mt Cook National Park.

The Mount Aspiring Region by Graham Bishop, revised edition, 1981.

Moir's Guide Book, two volumes, *Northern Section* (fifth edition 1977) edited by Lawrence Kennedy, and the *Southern Section* (fifth edition 1979) edited by Gerard Hall-Jones. These are walkers' guides to the south-west corner of the South Island.

All the above books are published by the New Zealand Alpine Club.

Mountaineering, Mountain Safety Manual 3 by Lindsay Main, published by New Zealand Mountain Safety Council, second edition 1980.

Maps. New Zealand is well covered with one inch to the mile contoured maps and other special maps of National Parks. They are difficult to obtain in Australia but can be purchased in gear shops and National Parks



Early morning ice — on the South-west Ridge of Mt Aspiring. Glenn Tempest

Visitors Centres in New Zealand, or by writing to the Department of Lands and Survey, Private Bag, Wellington, New Zealand.

Equipment retailers. These specialist suppliers are an excellent source of local literature (guide books, general references and maps) and advice. See the *Wild Directory* for further information.

Other courses. This survey only includes courses run over the summer of 1984-85. A number of the companies mentioned run winter climbing, ski mountaineering and cross country ski trips and courses.

The New Zealand Avalanche Institute (PO Box 36, Mt Cook, New Zealand) has courses on ski area avalanche control and snow safety, also held over winter.

Many (New Zealand) clubs run instructional courses for members. ●

Chris Baxter is editor and publisher of *Wild*. Since Contributors notes on *Tom Millar* were published in *Wild* no 4 he has been on an expedition to India's highest peak, Nanda Devi, and joined *Wild* as distribution manager. Glenn Tempest (see Contributors, *Wild* no 4) has also climbed in the Himalayas recently. The three have a combined New Zealand mountaineering experience of many seasons.

TrackNotes

Kanangra Canyons

A guide to these Blue Mountains wonders by *Dave Noble*.

• IN THE VICINITY OF KANANGRA WALLS THERE ARE MANY waterfalls which can be visited when using canyoning techniques. These Kanangra Canyons, quite different in character to the constricted sandstone canyons of the northern and central Blue Mountains of New South Wales, are typically open, with massive waterfalls tumbling over quartzite cliffs. Despite being accessible to sunlight, they are no less committing than the sandstone canyons and encompass some of the most spectacular scenery to be found in the Blue Mountains.

Many of the canyons can be comfortably visited in the cooler months as no compulsory swimming is involved. However summer, with more hours of daylight, is probably the best time to attempt them: the option of a swim in the abundant crystal-clear pools is a worthwhile bonus.

It is not the intention of this guide to give a detailed step-by-step description of each canyon which, the author feels, would lower the challenge of some canyons, particularly the more remote, less frequented ones.

The information given should be sufficient to enable and encourage **competent and experienced canyoneers** to visit some of these spectacular and exciting places. **The directions left and right are given as facing downstream.**

Difficulty of Trips. For the majority of these canyons, the level of difficulty depends greatly on the water level and weather.

Dione Dell is an easy trip, well suited to beginners (with suitable leadership). All the others, including Kalang Falls, should be regarded as **serious and potentially dangerous undertakings.**

The experience of a party that includes one or two competent people as well as beginners may give the impression that a canyon is easy. A different party may find the same canyon a nightmare with ropes jamming, followed by being benighted in freezing conditions with little food.

Maps. All the canyons mentioned can be found on the following Central Mapping Authority of New South Wales maps: Kanangra 1:31,680 or 1:25,000 (new edition), Yerranderie 1:31,680 or 1:25,000 (new edition), and Jenolan 1:31,680 or 1:25,000 (new edition).

Safety. Most, if not all, the canyons in this guide have the potential to be **extremely dangerous**. Many of them not only require that all party members are competent at abseiling in awkward places but also they should be proficient in rigging and de-rigging pitches. (It is vital to have no knots or tangles in ropes on overhangs.)

As these canyons are of a more open nature, the consequences of a flash flood may only mean the party may be stuck on a ledge rather than swept over a waterfall. Nevertheless rain can make the rock extremely slippery.

Large parties should be avoided for the more serious trips. Often there is insufficient room for more than one or two people to stand near a belay point, so multiple sets of ropes may need to be carried even with parties of only four people.

Large parties also increase the chance of loose rocks being dislodged. **Helmets** are strongly advised for this reason, particularly in Kanangra Falls, perhaps the most dangerous of the canyons.

Warm clothing and a parka or spray jacket should be taken to avoid exposure. The spray from the

waterfalls can be very cold even in summer.

On your first visit to some of these canyons it is often wiser to go with people who have previous experience of the canyon. Many bushwalking clubs in the Sydney area organize regular trips to the canyons and are a good source of technical expertise.

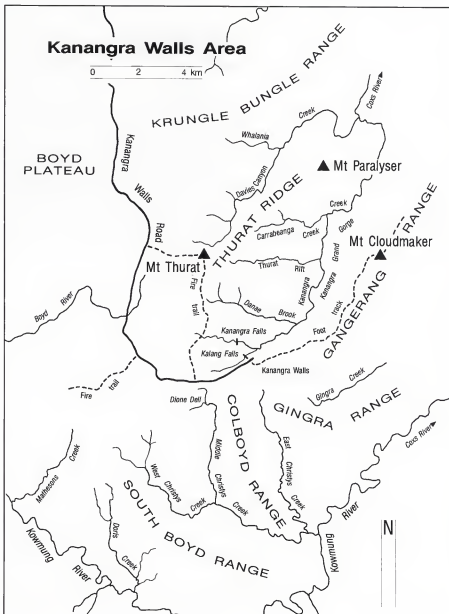
Equipment. Two ropes, preferably both of 50 m, should be carried as a minimum. On longer trips with parties of four or more, two sets of ropes and a 'leap-frog' technique can speed up progress.

Many belay slings of various lengths should be

carried. Old slings found at the top of abseils should be treated with great caution. Back them up with a new one. Slings may be needed to be attached to bolts or pitons.

Piton brake-bar abseiling is probably the safest abseiling method to use in those canyons where there is a high chance of dropping krabs or figure-8 descenders into deep pools. It is vital the piton used as a brake-bar is longer than the longest diagonal of

The joys of canyoning! (Danae Brook) Photos Noble







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FOXY

the crab.

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Helmets are recommended.

Kalang Falls 1 day, 2 x 50 m ropes, no swims. Kalang Falls is a long set of waterfalls that start near Echo Head and tumble down the side of Kanangra Deep. With easy access and a spectacular setting, it is little wonder that this trip has become very popular — parties should bear this in mind when considering their starting time and party size. For large parties several sets of ropes should be used.

From the old Kanangra car-park, walk along the road towards Echo Head and follow a track to the north-west down a spur into Kanangra Brook. The first waterfall starts 100 m downstream. It can be easily abseiled on the right-hand side from a tree belay (35 m). The next waterfall is a 50 m drop and can be abseiled in one abseil (be careful of rope jam) or two short drops. The belay is a tree on the right-hand side. The third and fourth falls are best abseiled on the left-

Many lengths of thin sling are required for all the bolt belays. There are many loose rocks, particularly in the slot and great care must be taken — **helmets should be worn**. Ropes (two or more sets for parties larger than three people) must be at least 50 m; 45 m ropes are too short. Party members should be experienced at route-finding, abseiling and scrambling. The starts of many of the abseils are awkward, and some could be very dangerous in even normal water levels. (The bolt belays were placed in during a drought.)

To start the trip, leave the Kanangra Road at the clay ruins (500 metres back from the car-park) and cross Kanangra Brook. Head across the mainly open Kitiani Heath to eventually reach the top of the main fall. Climb round on a large ledge to the left, level with the top of the fall, and locate a set of bolts where the ledge begins to peter out. From here it is a spectacular 50 m abseil down into a slot on a sloping boulder-covered false floor. A hand-line may be needed to reach the next belay point, just above the next drop.



Kanangra Walls.

hand side — be careful again of rope jams when retrieving the rope, especially on the long (50 m) fourth abseil. The next few waterfalls are short and can be abseiled or scrambled round. The fun starts again with a 30 m abseil down a ramp on the left side of a waterfall. If the ramp is wet, it is very easy to slip into the waterfall.

Not far below is the highlight of the trip, a waterfall about 70 m high. This is abseiled in two stages on the left side (slings needed for belay). Make sure you stop about half-way down on a convenient ledge, and use a tree belay to reach the bottom. The last fall can be bypassed by scrambling or abseiling (40 m) on the right.

The usual exit is the gully 100 m downstream of the Kanangra Creek junction. This gully, Murdering Gully, can be difficult and dangerous in wet weather. It is a short, steep climb to the defile between Kanangra Walls and the car-park (30 minutes to 1½ hours).

Note: many abseils in Kanangra Falls can be scrambled, and Murdering Gully can be reached from many places by horizontal scrambling.

Kanangra Falls 1 day, 2 x 50 m ropes, short swims. Kanangra Falls consist of about half a dozen giant waterfalls at the head of the Kanangra Deep. To quote from the *Gundungarra Book's* description: 'This descent typifies the grandness of scale of the Kanangra Canyons which is unsurpassed anywhere in the Blue Mountains.'

Until recently, the main fall (100 m) had to be bypassed by scrambling routes on the right side. Now, belay points consisting of sets of stainless steel bolts exist down the dark slot behind the main fall. Bolt belays can also be used for most of the lower falls.

This drop (dangerous because of possible rockfall from the ledge above) of 50 m almost reaches the bottom of the slot. **Great care needs to be taken throughout this section**, particularly in rigging the second belay point.

Two shorter abseils and an avoidable swim lead on to a large ledge on the right side at the bottom of the slot. Great care needs to be taken so that the person in front does not get swept over one of the drops. From this ledge the going becomes a lot more straightforward. Climb further to the right (e-pose) until it is possible to abseil into a large gully that, incidentally, provides a scrambling route 'ack to the top of the falls.

Near the bottom of the gully there is an easy 50 m abseil beginning at the left and finishing at the right of the waterfall. From the bottom of this drop, the going is easy, with only an avoidable water-jump, before coming to the top of the next main waterfall — a drop of about 80 m. One route from here is to leave the creek and climb over a small ridge to the left and abseil down the wall to the left of this ridge — however belay points (trees) require some scouting. The other route is to proceed by scrambling or using a hand-line to reach the top of the large single drop. Bolt belays on the right can be used for a 50 m abseil to a large ledge near the bottom of the fall. This ledge can be dangerous in high water. In low water it is possible to scramble back to the floor of the creek, otherwise an abseil may be required.

The next waterfall follows soon and can be abseiled on the left (50 m) into a pool. An old belay point, a tree on the right, seems to have gone.

There are two remaining waterfalls and only the top one presents an obstacle. It can be scrambled on the left (difficult) or abseiled on the left (20 m, easy).

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although it has been jumped (for the foolhardy?).

The usual exit is via Murdering Gully, as described for Kalang Falls.

Danae Brook 1 long day, 2 x 37 m (min) ropes, short swims

The 'Brook' is a very exciting, spectacular canyon. It is suitable for **experienced** parties. Many of the abseils have awkward starts and finishes and great care needs to be taken to avoid rope jams. This canyon can be difficult and dangerous in high water. Even in good conditions incompetent parties have found themselves benighted in the canyon.

The two common ways to reach Danae Falls are 1 from the Mt Thurat Road — it is probably best to get into the creek as early as possible to avoid ridge-top scrub — and, 2 from Kanangra car-park walk back along to the clay ruins. Head across the Kittani Heath and cross Kanangra Creek above the falls. Cross Big Misty and drop into Danae Brook before the falls.

The first cascade-waterfall is probably best scrambled on the left to reach the lowest tree belay. From the tree a 35 m abseil leads into a narrow fissure next to the waterfall. The next abseil requires a long sling for a belay. It is an awkward 30 m abseil over chockstones to a pool. The canyon here is almost narrow enough to chimney. With care it is possible to avoid a cool swim in the pool at the bottom. A log or thread belay is generally used for the next abseil (40 m), most of which is free fall down a waterfall. This abseil and the next are the highlights of the trip. After the waterfall abseil, the canyon opens up somewhat; a steep gully on the left has been climbed and could provide an escape route. Several routes exist from a large ledge on the left. The most spectacular route, **Danae Direct**, is from a thread belay, following the course of the water (difficult start). Alternatively a tree on the left provides a belay for an easier, although less spectacular, abseil. In very high water, the ledge can be followed further to the left, past the gully described above, towards a pinnacle — the wall below the ledge can be abseiled in two stages, so avoiding the 'slippery log' abseil. (Good belay points difficult to locate.)

The 'slippery log' abseil follows below the Danae Direct abseil. It is difficult in high water because, usually, the rope cannot be thrown the whole way down the waterfall in one go. This means that the first person must stop part way down and untangle the rope — the higher the water, the more difficult this becomes. The abseil ends on a slippery log jammed in a small pool.

From the bottom of this abseil, the canyon opens up somewhat and the going becomes easier. A 20 m abseil from pions on the left is the first in a series of easy, short drops, some of which can be climbed down in dry conditions. The final large waterfall is about 30 m and can be abseiled from a pion belay on the left. Be careful of rope jams here.

Below this waterfall is a possible (poor) campsite. Next follows a massive boulder chute contained between enormous towering walls. It is great fun scrambling down the boulders although care still needs to be maintained.

A short abseil (or hand-over-hand) completes the canyon. 100 m below this last drop a steep scree gully on the right provides a route to the col between Spire Head and Thurat Spires.

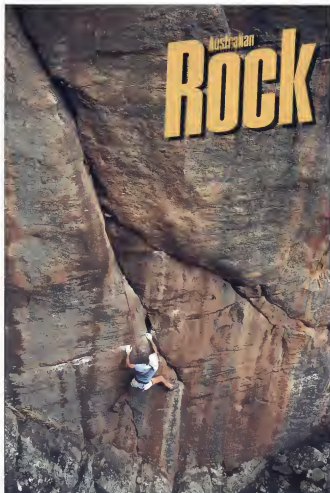
It is a pleasant walk down the rest of Danae Brook to the Kanangra Creek junction and the more usual exits: 1 Climb directly opposite to Kilpatrick Causeway and return via the track to the Walls. 2 Walk upstream along Kanangra Creek and out via Murdering Gully. 3 Climb the ridge to Thurat Spire (one abseil off the Second Spire) and out via Big Misty — a slow but spectacular route.

Dione Dell 1 short day, 2 x 40 m ropes, no swims
Dione Dell is the name given to the canyon high in Christs Creek. An alternative name is Myles Chasm, named after Myles Dunphy by Max Gentile, both pioneer bushwalkers in the area.

This is the easiest canyon in the area and it is an easy and enjoyable trip for beginners. (If necessary, each waterfall can be climbed round without great difficulty. Despite its ease, it is still an enjoyable trip for experienced abseilers.)

To start the trip, leave the Kanangra Road about two kilometres before the car-park, opposite the Mt Thurat Trail, and head south a short distance through scrub into Dione Dell. The walk down the creek to the waterfalls is very pleasant.

The first waterfall is at the junction with Christs Creek. It is best abseiled or scrambled on the right (20 m). It is soon followed by another fall (25 m) which



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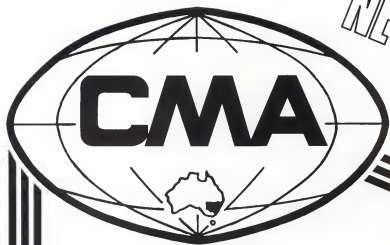
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can be abseiled from trees on the left or right.

The highlight of the canyon is ten minutes downstream — a waterfall falling out of sight round a corner. The belay point, a tree, is reached by scrambling down to a low ledge on the right (35 m abseil to a ledge).

Further downstream, a short abseil down a 10 m fall completes the canyon. The exit route is to walk to Margaret Falls, then climb out a spur on the left until the Colboyd Range Track is reached. Follow this out via Wallaby Pass (past the Grotto of Uranus!) and Pindari Tops.

More Remote Canyons

Most of these canyons require two days. Hence it is necessary to abseil and sometimes swim with a full pack. In many of the creeks, abseils can be bypassed by scrambling, although this often necessitates a long detour from the creek bed. In all cases 2 x 50 m ropes are sufficient.

In many of these canyons, there are many possible routes and belay points.

Middle Christys Creek usually 2 days, 2 x 50 m ropes, swims

Christys Creek below Dione Dell provides a worthwhile trip. Margaret Falls can be reached by going down Dione Dell as described above, or by going down the Colboyd Range Track over Pindari Tops.

The major difficulty is Margaret Falls itself (100 m) which can be scrambled easily to the left (a fair way from the creek — down a long scree) or abseiled in stages down a steep bank well to the right of the fall (100 m). Note that most of the main fall overhangs.

Below Margaret Falls are more waterfalls and swims.

East Christys Creek 1-2 days, ropes and swims optional

This can be entered high up by following the creek down south of the defile between Kanangra Walls and the old car-park. Leave the track at the Dance Floor Cave.

This creek is very beautiful and contains numerous waterfalls and cascades. Many of the waterfalls make attractive abseils.

West Christys Creek 2 days, 2 x 50 m ropes, no swims

The two branches of this creek — Wheengee Whungee and Woogemal Creeks make excellent trips. Be very careful of loose rocks in the major waterfalls.

Woogemal Creek has a large waterfall (45 m) through a narrow defile. The main falls in Wheengee Whungee Creek are too large for a single direct abseil. The fall can be abseiled to the left with some scrambling and scouting for belay points needed.

After these two creeks meet there is a series of waterfalls, several of them high, all worth visiting. Note that it is possible for fast parties to reach the Kowmung River from high up in any of the Christys Creek branches in one long (summer) day.

Thurat Rift 1-2 days, 2 x 50 m ropes, no swims

This provides an excellent trip for experienced parties. It features quite a few long abseils (50 m) and steep scrambling (and consequently requires careful route-finding).

The creek is best entered high up from Mt Thurat, to avoid scrub on the ridges. The nature of the trip is similar to Danae Brook, but less committing.

Carra-Baaga Brook 2 days, 2 x 50 m ropes, no swims

Another excellent trip, this creek is somewhat similar to Kalang Falls. It is certainly at least as spectacular. The creek can be entered from the Thurat-Paralysar Range.

The main fall (the first really big drop) is best abseiled in stages on the right side.

Davies Creek 2 days, 2 x 50 m ropes, no swims Drop into Sally Camp Creek from the Thurat-Paralysar Range (or elsewhere). This creek is particularly spectacular on a grand scale.

The major difficulties are encountered on the second waterfall (50 m), which requires careful choice of belay point. The large fall at the bottom of the canyon can be partly down-climbed.

Other Creeks

The following creeks contain waterfalls that can be abseiled (or scrambled) and can be done as canyoning or bushwalking trips. (None has compulsory swims.)

Mumbaded Creek, Whalania Creek, Ti Wila Creek, Gingra Creek (upper part), Mathesons Creek and Doris Creek. As well, the Kowmung River has three sections of canyon (none requiring abseils) accessible from Kanangra Walls (Morong Deep, Moona-Loomba Canyon and the Bulga Denis Canyon). •

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Reviews

Wilderness Diary 1985 edited by David Neilson
(Australian Conservation Foundation, 1984, RRP \$12.95).

This diary deserves a hearty welcome from all wilderness lovers. The first Australian wilderness diary of this standard, it promises to be a popular Christmas present this year.

The diary's format features a week to a page, with a practical spiral binder. The left-hand page of each spread is taken up with a single photo from one of Australia's wild places. The variety of photography is breathtaking, and the quality is superb throughout. Reproduction is of a generally high standard, although there are one or two examples in which the photographs appear to be too dark.

Very reasonably priced at \$12.95, this diary cannot be recommended too highly, even if you don't need a diary!

Brian Walters

Battle for the Franklin by Roger Green
(Australian Conservation Foundation/Fontana, 1983, RRP \$8.95).

I dislike confrontation, so although I attended the Franklin blockade and felt very strongly about the issue, a tendency to conciliate led me to hope some middle ground might accommodate the pro-dam arguments. It was not to be. The issue was fought out to the finish, right to the High Court.

Looking back it now seems inevitable that the issue would not settle, because the Franklin involved a conflict between two fundamentally opposed directions for Western society. It was a focus for far deeper dilemmas than the question of whether a river should be saved. Despite all the complexity of the arguments, the pro-dam position was one which ultimately saw economic considerations as the key to use of resources. Even though the dam made no sense on economic grounds, the heart of the opposition to it lay in a realization that there were values more important than money: responsiveness to natural beauty, the ability of people to relate to their surroundings and spiritual sensitivity.

The importance of this clash of values extends far beyond the Franklin.

The contribution of Roger Green's book is that it touches on these deeper values. It must have started as a simple, journalistic idea to interview as many people as possible across the spectrum involved in the Franklin campaign. The result is a powerful book of considerable scope as people reveal the values that motivated them.

A broad range of views is expressed, from people such as Robin Gray and Eric Reece to Bob Brown. Most of the big 'names' are there, and several less well-known ones, but there are significant omissions. We hear nothing from Harry Holgate, from the powers-that-be in the Hydro-Electric Commission, from the lawyers involved in the dams case or even from 'ordinary' blockaders. But what we have is enough to paint the outlines of the picture.

John Mulvaney (archaeologist) begins to refer to the real issues when talking of Kutikina Cave:

"So I was very happy to go on oath and say that I do consider that site to be absolutely



Lonely snow gum, Mt Neise, Bogong High Plains, Victoria. Photo by Karen Alexander, reproduced from Wilderness Diary 1985.

outstanding and among the best sites, not only in Australia, but in the Pacific region, for its potential and for what it actually contains.

'Also for what it symbolizes. It's a tremendous testimony to the human spirit. These are the sort of sentiments that don't sound like "science" and send the Hydro-Electric Commission or politicians "up the wall", but I sincerely believe in such values.

And that's what the World Heritage Convention is all about.'

Unless our society can make decisions with concern for such values we will be unable to build a lasting and worthwhile civilization.

The book is more than a discussion of values, covering as it does a great variety of impressions and experiences. It includes background information on the discovery of Kutikina Cave, accounts of planning for the blockade, insights into the political manoeuvring behind both the destruction of Lake Pedder and the Franklin campaign. From Kevin Kiernan (first

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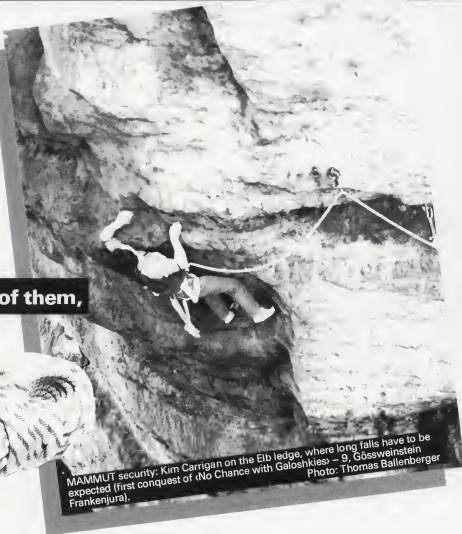
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WILD OCT/NOV/DEC 1984 73

Director of the Tasmanian Wilderness Society) and Peter Thompson (author of *Power in Tasmania*) comes a conviction which fair takes the breath away: Lake Pedder can still be saved, if drained and carefully revegetated.

My praise, however, is not unqualified. *Battle for the Franklin* is unattractively presented; it is printed on poor quality paper and the

the book is simply being padded out.

In general, the photography works well and shows an original eye, despite the fact that there are one or two examples (by far the exception rather than the rule) in which shots are blurred and lack clarity. This is in contrast to the large number of shots which show, by their fillgree of detail on leaves and petals, just what photographic excellence is possible.

However, reproduction of these photographs, though generally good, provides too many examples that are below standard. Far too many are washed out, and this is particularly true of the entire section on Washpool, in which subtleties are often lost through excessive contrast or insufficient depth of colour. The results are often pale and unattractive.

In the text, there are occasional lapses in attention to detail. For example, the book states on page 262 that the aboriginal inhabitants of Tasmania penetrated to the South-west 'perhaps less than 3,000 years ago'. There is no source given for this remark, (or indeed for any of the material in the book), and it is hard to reconcile this statement with the evidence of much older occupation found in Kutikina Cave in South-west Tasmania.

It must have been an ambitious undertaking to set out to cover such large and widely separated areas, and to discover so much about them, in a comparatively short period. This makes the achievement very different from that of, say, Peter Dombrovski, who has steeped himself in his region of interest for a lifetime. But the book works very well on its own level, and when all is said and done I enjoyed it immensely and had no trouble entering into its spirit of celebration of wilderness.

BW

A Field Guide to the Grampians Flora by Rodger Elliot (Algona Publications, revised edition 1984, RRP \$12.95 paperback, \$15.95 hardback).

This is another title in the generally excellent Algona series of regional guide books and maps for use by bushwalkers, tourists and all those who are active in the Australian outdoors.

Rodger Elliot's *A Field Guide to the Grampians Flora* is a revised edition of his *An Introduction to the Grampians Flora*. This pocket-sized book was first published in 1975 and has been considerably expanded to include a much larger range of plants. As the author notes, a natural history guide is always subject to revision, and with his many years of experience and interest in Australian native plants, Elliot's knowledge in this field is to be respected.

My own interest and awareness of the beauty and uniqueness of our native plant life was stimulated by endless forays to the Grampians. It is a delightful destination in all seasons and I have always felt there has been a real need for a well-illustrated layperson's guide to the flowers and plants of the region. Perhaps my expectations were unrealistic, but I do not feel this guide provides an adequate information base for plant identification within an area containing such great floristic diversity as the Grampians.

The author has handled the organization of the subject thoroughly by dividing it into three main sections alphabetically arranged for ready reference. At the end of each section an identification chart enables a quick keying out of plants. There is also an introduction which gives a brief outline of the Grampians' history, geography and geology. Peculiarly, the chapter titled 'Introduction to Plant Identification Guides', which explains how the reader should use the key, is placed at the back of the book.

The guide also includes colour photographs, individual plant feature sketches and some larger botanical illustrations. Apart from a few exceptions, the photographs are perhaps a little mediocre. The plant feature sketches are a useful identification tool and the larger format botanical illustrations are the graphic highlight of the book. In any botanical illustration it is difficult to achieve the necessary balance between botanical accuracy, the illustrator's line of informality to indicate the plant's character and growth habit and an aesthetically pleasing illustration.

Despite its good intent there are some important omissions which limit the usefulness of this publication. A major error in any field guide must surely be the failure to include any map of the area concerned. One of the factors listed for plant identification is location, and the Grampians have been divided into ten areas in the identification charts. Plant occurrences at specific sites are also noted in some of the individual species descriptions but there is no plant location map. The earlier publication, *An Introduction to the Grampians Flora*, contained several detailed maps. Another useful map that might have been included, but is not, is a vegetation area map of the extensive Grampians ranges, indicating the general occurrence of the eight characteristic vegetation types.

A number of other inconsistencies detract from the overall value of the book. A scale measurement is normally included in any botanical guide to allow for ready comparison of leaf and flower dimensions, both in the field and for pressed specimens. Similarly, any reasonably experienced naturalist or plant lover would expect the particular family of each plant to be included in the detailed plant descriptions.

Consequently, *A Field Guide to the Grampians Flora* is a disappointing publication. Its graphic style is not terribly adventurous and its text could have been improved by tighter editing and a more thorough assessment of both the reader's needs and the role of a field guide.

Francine Giffelder

50 Day Walks Near Melbourne by Sandra Bardwell (Anne O'Donovan, third edition, 1984, RRP \$8.95).

Spare a thought for your reviewer. Reviewing track notes is very difficult, even when you have already walked a route. It is only when you have the notes in your hands and try to use them that you can assess their value. But reviewing the work of a fellow contributing editor (as is Sandra Bardwell) makes things even more difficult. If you are complimentary you are accused of favouritism; if you are critical you might offend your fellow editor.

When I looked at the latest edition of *50 Day Walks Near Melbourne*, the diagonal banner on the cover proclaimed: 'RE-WALKED & REVISED'. Pondering this, I turned to the notes on Wilhelmmina Falls, which I had found inadequate on a previous trip. The notes had been vastly improved, and the sketch map included several details omitted from the previous edition. To my tidy mind, however, there still seemed too many loose ends. In one case, an easily-missed turn-off is not described; in another, (I think because the track has been re-located), one is told to turn left when in fact it is necessary to turn right. For the alert walker these details will not cause problems, but for others they may lead to some 'geographical embarrassment'.

Notes for more straightforward walks, as those for Mt Juliet, or Sherbrooke Forest, have required virtually no changes from the previous edition, and they are quite adequate.

The real strength of a book like this is the way



Wilderness Society Co-Director Karen Alexander. Photo by Geoff Lea, reproduced from *Battle for the Franklin*.

photographs are poorly reproduced. Nevertheless, it reveals an inspiring pattern of ordinary people fighting for what they know to be important. As Bob Brown says in the book, the saving of the Franklin offers us hope. Looking at the larger issues of our time, that's just what we need.

BW

Australia the Beautiful Wilderness text by Allan Mout, photography by Leo Meier (Wattle Books, 1983, RRP \$38.95).

This large and opulent book seeks to convey the diversity of Australia's wilderness. Although there is a chatty text, the bulk of the book is taken up with a rich variety of coloured photographs, well supported by maps. The authors have set out to visit and record seven areas of Australian wilderness: Washpool, Hinchinbrook Island, Kakadu, Fitzgerald River (Western Australia), the Simpson Desert, Victoria's Bogong National Park, and Tasmania's South-west.

The photographs are not all of spectacular sunsets (though there are those), but cover a wide variety of subjects such as floral life, birds, animals and landscapes. There are even some aerial shots, those of the Simpson Desert providing a stunning tapestry of shape and colour. At times there is a repetition; pages 107 and 131 show shots of the same sunset with the same pandanus tree. Pleasing to the eye they may be, but with a publication like this, one expects originality on every page, and this kind of blunder gives the dangerous impression that

it gives new ideas. Bardwell has avoided some areas near Melbourne which are already popular, such as the Cathedral Ranges, and included others which might be overlooked because they seem too popular, such as Sherbrooke Forest. There is also an index with walks classified for the seasons, for degree of difficulty and for the type of scenery involved.

You won't always find this book (or, for that matter, any set of track notes) completely accurate, and you will have to think when you use it. But, doing the best I can to review this attractive and handy book, it remains to be said that there really is no better collection of track notes for day walks near Melbourne.

BW

Back Door Ballads cassette by Stephen Whiteside (1984; available by mail order from PO Box 42, Glen Iris, Victoria 3146, for \$9.00 including postage).

If you're looking for something profound, you won't find it on this tape. But if you enjoy some crazy poetry and toe-tapping songs, *Back Door Ballads* just might interest you. Most of the material on the tape (six songs and 12 poems) has an Australian flavour, and a love for the bush (particularly the Victorian Alps) is the common thread throughout.

Whiteside works part-time as a doctor in Port Melbourne, but also performs in music and poetry. He produced the cassette himself, but there is instrumental support from Louis McManus (formerly of the Bushwhackers) and sound effects from the ABC. Whilst Stephen Whiteside has written the lyrics, the tunes for the six songs are those of well-known bush ballads.

This cassette is at its best when Whiteside is celebrating the simple pleasures of life, like eating fruit, Mt Donna Buang (near Melbourne) or a day in the bush. His concern for conservation issues is presented in the form of an infectious enjoyment of the outdoors.

BW

There's a Frog in My Stomach by Michael J Tyler (Collins, 1984, RRP \$5.95).

Most readers will be familiar with frogs. Most will also be familiar with their life history which goes somewhat thus: fertilized eggs are laid in some pond or puddle, and the developing tadpoles are left to fend for themselves as they metamorphose into adult frogs. Well, that's not always the case.

In this entertaining little book Dr Michael Tyler of Adelaide University points out a number of exceptions to the above generalization before discussing in detail one of the most interesting of all, the gastric brooding frog (*Rheobatrachus silus*). This rare and recently discovered Queensland frog, now being made even more rare by the destruction of its rainforest habitat, actually swallows her young (or fertilized eggs — nobody seems to know quite which), incubates them in her stomach and gives birth to a young frog through her mouth. As Dr Tyler points out: 'This is not only unique for a frog, it is unique in the entire animal kingdom'.

This quite fascinating piece of fauna is of more than theoretical interest to zoologists. Because of the obvious need to suppress the flow of digestive juices during the course of the pregnancy, the frog has attracted quite a lot of attention from researchers looking for a cure for gastric ulcers. This illustrates yet another reason why our rainforests should be guarded with care: we need to maintain a diversity of species.

There's a Frog in My Stomach is a book for the non-specialist reader who wishes to know a bit more about one of the inhabitants of the



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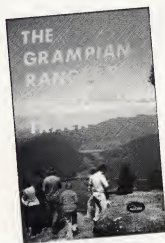
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bush. It is generally well illustrated with line diagrams and photographs.

Alan Burns

The Wildlife and Nature Photographer's Field Guide by Michael Freeman (Thomas Nelson Australia, 1984, RRP \$15.95).

This is a new addition to the abundance of photographic instructions and manuals already available.

A hard cover, medium sized book, it has been designed for use on field trips (but would be a bit on the heavy side for pack-carrying bushwalkers).

The introduction suggests that nature photography fuses together three skills — the ability to see pictures, to handle a camera quickly... and to find and approach the subject. Michael Freeman's subjects, more often than not, are wild and often large and dangerous animals in their natural habitat. African elephants and lions, a bull moose from the northern forests, migrations of wildebeeste and other herd animals, seals in their ice environment or a walrus with long, pointed tusks are just a few of the amazing topics featured.

Obviously, the book is highly specialised for people interested in 'stalking' or photographing from hides. I would not recommend it to absolute beginners but for anyone else it includes excellent general photographic information and has sections on landscape, close-up, underwater and aerial photography, just to name a few.

The chapters — mostly one double page each — unfold an astonishing array of subjects such as map reading, first aid, understanding the weather, dressing for field photography, baiting and luring technique.

A section devoted to animal tracks relates only to the Northern Hemisphere. The book has not been written for Australian conditions, but many situations are similar. Most of the photographs (chosen as samples for various topics) had been taken on a series of field trips in Britain, Europe, USA and Asia.

There are stunning images, and Freeman's work has appeared in publications like *Time-Life*, *Geo* and *The Smithsonian Magazine*. His latest book could be of real help to the serious nature photographer.

Jutta Hoesl

Emergency/Survival Handbook by Robert E Brown (American Outdoor Safety League, 1981, RRP \$3.10).

Of all the handbooks relating to emergencies and survival, this one (distributed in Australia by Paddy Pallin) gets the points for natty presentation. Very compact, it comes in its own self-sealing plastic bag and has a signal orange cover. In the middle of it is a bright silver sheet of paper, ostensibly for use as a signalling device or to increase the light thrown by a candle. It would be of doubtful value for those purposes, but it does provide a striking effect graphically, and the silver paper is (when new) good enough to be used as a mirror.

The book is so small (45 tiny pages, three of which are blank and several of which contain information which will not be of interest to Australian readers) that it cannot be regarded as anything like as comprehensive as most of the other books available on the subject. Some of the material is out-of-date or inappropriate, such as the information on snake bite which should be ignored.

This book is small enough to pack into a first aid kit, and I will probably do that with it. Nevertheless its usefulness, at best, will be quite limited.

BW

Lake Mountain Ski Trails Map (Algonia Publications, 1984, RRP \$1.95).

Lake Mountain has grown to be a very popular ski touring venue for Melbourne snow enthusiasts.

Only 110 kilometres from the city, it is the nearest alpine region to Melbourne. The past few years have seen many new marked trails and facilities.

Algonia's latest map of the area (1:15,000 scale) features a useful scale, a detailed approach map, and notes on the area.

BW

Cross Country: Hotham-Falls Creek (Algonia Publications, 1984, RRP \$1.95) and **Davenport Whisky Flat — JB Plain Ski Trails** (Algonia Publications, 1984, RRP \$1.95).

These two maps are based on previous Algonia guides to the southern regions of the Bogong High Plains. The former's scale is 1:50,000 and the latter's 1:25,000.

Both maps are of very limited scope, and although very well presented, contain little information which was not available on previous maps.

The maps are both designed for use by skitourers, and have plenty of detail as to marked trails, contours, vegetation, and other features likely to be encountered.

BW

Lake Tali Karng and Snowy Range (Algonia Publications, 1984, RRP \$3.25).

The Snowy Range area, including Lake Tali Karng, has been a region of enduring interest for walkers for many years.

This latest map covers the approach from Purgatory Spur to the south and extends northward as far as Mt Howitt.

The area around Tali Karng itself receives the most detail, and is at the scale of 1:50,000. (The rest of the map is 1:100,000.)

There are notes on the area, as well as suggested walks. The map is in two colours, and includes contours as well as the other topographical features.

BW

Falls Creek-Mt Hotham by David Rowlands (Published by the cartographer, 1984, RRP \$4.20).

I am not aware of David Rowlands having produced any maps before but this is certainly a notable start. In full colour, it features contours, walking tracks, pole lines, and shading showing different types of vegetation and rock outcrops.

The scale (1:50,000) is ideal. This map of a prime alpine region will be welcomed by both skiers and bushwalkers.

Rowlands claims that the map's major attribute is its accuracy and that all tracks and huts have been checked on foot. He also informs us that there will be another map in the series; the second will cover Mt Bogong to the Falls Creek area and is expected to be available in 1985.

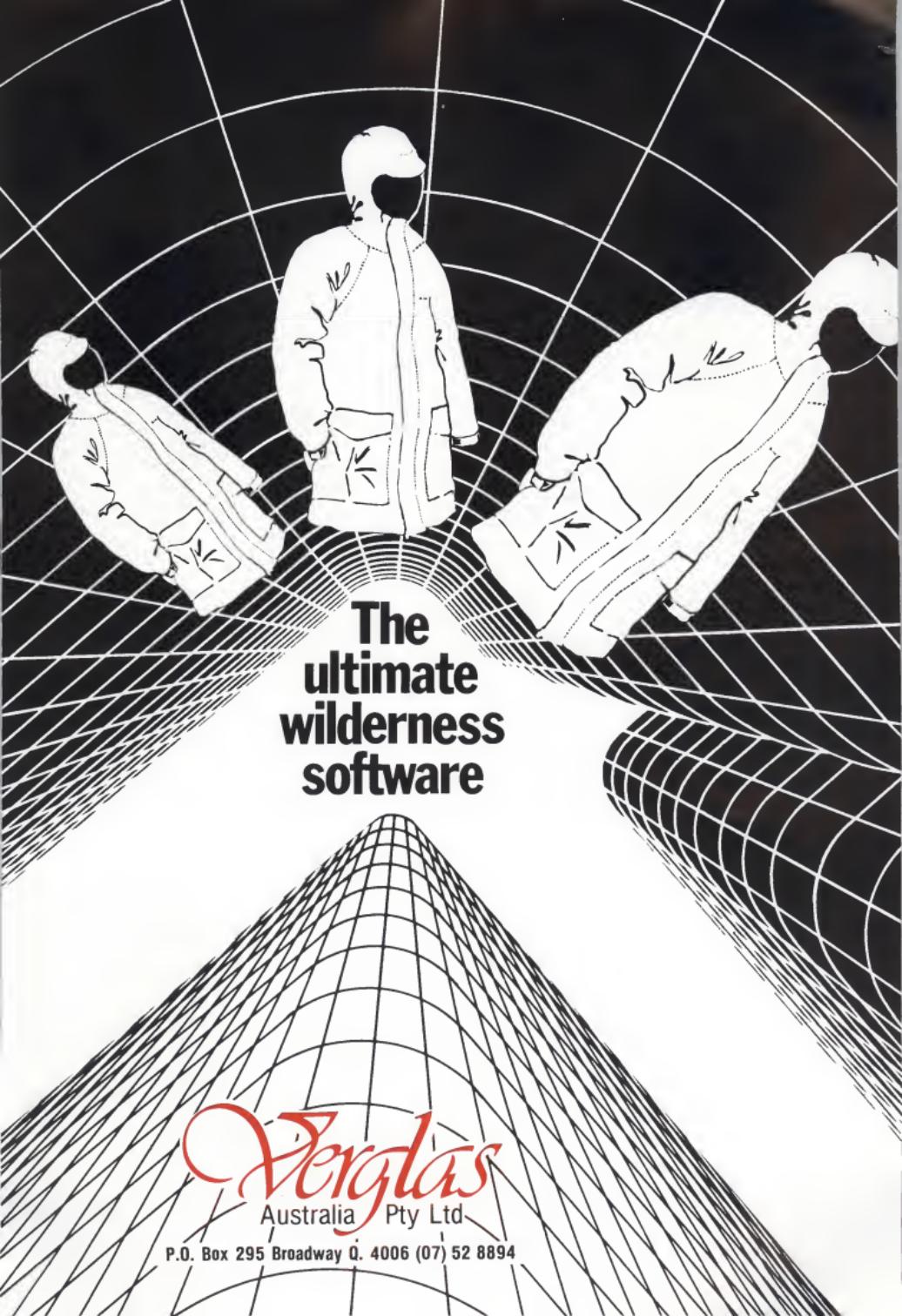
BW

Western Australian Trees Posters by Cliff Winfield (Forests Department of Western Australia, 1984, RRP \$2.50 each or \$10.00 set of five).

These substantial (900 x 700 millimetre) colour posters are well produced on linen paper. 'Depicting the diversity of Western Australia's woodlands and its unique trees' they should appeal to tree lovers throughout Australia.

They are available (postage is extra) from Information Shop, FDWA, PO Box 104, Como, Western Australia 6152.

Chris Baxter

The background of the advertisement is a black and white wireframe grid that creates a three-dimensional perspective, resembling a dome or a tunnel. Three stylized, white-outlined figures wearing parkas are positioned at the top of the frame, appearing to look down at the text. The central figure is standing upright, while the two flanking figures are slightly angled.

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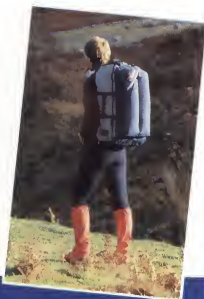
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Selecting the Right Bag

●MANY OUTDOORS PEOPLE HAVE WALKED, climbed, towed or merely hiked up, weathered, for days on end without food. Yet to brave the elements for such a period without sleep is much rarer and considerably more taxing — unlike our storing of energy-giving fat, we cannot build up reserves of sleep. But if it is twenty below and blizzarding out on the main range or a steamy night up on Cape York, sleep is important.

Such basic considerations make the sleeping bag the most commonly used and arguably the most important item of outdoor equipment. The variety of conditions encountered in Australia is vast, but no more so than the camping and sleeping habits of Australian outdoor enthusiasts. You, the consumer, best know your requirements. With adequate guidance (through the murky waters of materials and ratings, and the claims and counter-claims of advertisers and catalogue writers) you will be well placed to choose the right bag for yourself.

Our initial stance in this review is that it is not so much that there are good bags and bad bags but that, given conditions of use, sleeping habits and budget, any bag might be the most suitable for a particular user.

Human beings are endotherms (warm blooded) and have automatic reactions to regulate body temperature. At the body core — the vital organs of trunk and head — that temperature must never vary much from 37°C, only a few degrees up or down to prevent heatstroke or hypothermia. To prevent or reduce heat loss, insulation is placed between skin and environment.

From prehistoric times man has come to prize various insulating materials for the warmth they afford. Examination of these traditional insulators shows that they disrupt the establishment of convection currents by partitioning the insulating layer into air cells so small that they would not uniformly enough for currents not to arise — hence the name 'dead air'. (Convection currents have been detected in air cells as small as two millimetres in diameter.) In addition, a very thin layer of 'boundary air' is trapped at the surface of each insulating fibre by molecular attraction or friction. Such air is almost immovable, resisting even the 'bellows-pump' action that expels normal dead air when the insulating layers are moved. It also resists conductive heat transfer from insulating fibres through to the remainder of the trapped air.

Surprisingly, however, the material out of which wool insulation is made (wool, down or even steel wool) makes little difference to the effectiveness of the insulation provided that the fibres are not compressed beyond a bulk density that would promote heat transfer by conduction.

The point is that dead air does the work, and dead air will be maximized through the physical configuration of the material and not the material itself. The insulating material should be dense enough to divide the insulating volume into air cells that are as small as possible without being so dense as to promote conduction, and the surface area within the insulation should be as large as possible.

As a rule of thumb, thermal insulation is proportional to the thickness of dead air. Despite provisos about density and surface area, the best, single (though by no means conclusive) guide to the potential warmth of a sleeping bag is the thickness, or loft, of the insulating layer. Of course, this needs to be balanced against the individual's ability to produce heat.

Two further factors will influence the efficiency of thermal insulation. First, the insulation should be placed as close to the skin as possible, as even small gaps leave space for convection currents to develop and leave space for untrapped air. Even small movements can pump untrapped air out of the insulation taking valuable warmth with it. Second, the insulation should be as evenly-distributed around the body as possible — any thinning of the layer may mean that heat equilibrium is not reached in that area and heat loss, or cold spots will occur. One bad cold spot could rob the bag of an effective 10°C.

Down or synthetic? Down has long been the benchmark for insulations, but many practical considerations could persuade the modern outdoors person to opt for synthetic insulations. The weight of down required to completely fill a given insulating volume will be smaller than for any other material. The resulting sleeping bag will be more compact when compressed — weight and size, the first two lines in the bushwalker's anthem. An equivalent synthetic bag would average 30-40% heavier and be at least two and a half or three times larger in volume in the stuff sack. However, in warm weather the hardy could possibly dispense with their sleeping mats and save a little weight — insulation fills will retain bulk and reasonable insulation under body weight. As for the packed

size, there is the option of using a tele-compression stuff sack to reduce bulk by up to 40%.

Down has greater resilience than synthetic fills in that it can repeatedly re-loft to maximum following compression. By comparison, synthetic fibres mat and displace — with every use and every compression a bag will lose loft. (The greater the compression the greater the loss.) Barring accidents, the effective life of a down bag will be two to four times longer.

The purly lofting ability of down means that it will mould more closely to the shape of the body and thus ensure greater efficiency. Against this, the stiffer synthetic fills are less likely to yield 'cold spots'.

In its lightness, relative mobility of insulation and better drape usually means that a down bag will have a wider effective temperature range.

On the other hand, synthetic fills have two big advantages and an enticing set of minor strings to their bow. Of the latter, all the synthetics are non-allergic, will not support mould or mildew, do not lose loft or loft following damage to the shell and requires more protection and more care and attention — if you don't have the personality to be a little obsessive about it, a synthetic bag might well be your best choice.

The two big pluses for synthetic bags are performance in wet conditions, and price. Delicate down tendrils cannot support the weight of water and will lose loft quickly with little moisture. Being extremely absorbent, the down will tend to 'wick' water through the insulating layer. If saturated, the bag will have no insulation value — all these difficulties being compounded by very slow drying; at least two warm fine days following saturation. The remedy is to cover the bag with a waterproof shell but the shell must also be breathable because in the course of a night we transpire and exhale more than sufficient moisture to significantly affect the performance of the bag through vapour condensing inside the shell. Unfortunately, the available waterproof/breathable fabrics are costly and for most people's requirements such expense is not warranted.

In contrast, the synthetic fibres are virtually non-absorbent and because of their slick surfaces tend not to suspend water between fibres in the fill. Even when saturated, a synthetic bag can be wrung out and will provide some insulation, especially if you can dry off and get into your waterproofs before

getting back into the bag. Conduction by water is the major form of heat loss in a wet bag, and unless you can take the above steps the night will be singularly uncomfortable irrespective of laboratory results. In this respect the major advantage of a synthetic bag is the ability to withstand reduced loft from the condensation of transpired and exhaled moisture and to dry quickly in the morning.

In USA, synthetic bags have a much larger share of the specialist 'backpacking' market than they do in Australia — price is the main reason. Australian and New Zealand synthetic sleeping bag manufacturers have stuck with relatively unsophisticated designs and construction methods — they produce quite good quality bags to mid three-season ratings at very good prices. However, to keep weight and bulk within bounds for three/ four- and four-season bags, more advanced techniques are required. In general, the only such bags available in Australia are American-made and relatively expensive because of exchange rates and import costs.

Synthetic insulation. A variety of solid acrylic and polyester fibres are still used in two- and low three-season bags but the main three materials now used in quality synthetic bags are the hollow fibres Holiolli, Qualolli, and the solid fibre Polarguard. A few other unspecified 'hollow' polyesters are being used in bags of generally good quality, and there is little doubt that, thermally, these fills will be reasonably efficient. However, if hard technical data is not openly provided one is left in the position of having to trust the reputation and pronouncements of the manufacturer.

Holiolli and Qualolli are short-staple fibres (meaning that they come in individual, five centimetre long, fine threads) with holes running longitudinally through each fibre, one in Holiolli, but in Qualolli. Both are crimped (like hair). Holiolli having a peaked and Qualolli a rounded wave pattern. Though the staples are separate pieces they must be fashioned into flat, manageable batts to resist displacement and clumping. Lately, the fibres have been lubricated, usually with silicon. The principal value of hollow fibres is their decreased weight rather than the extra trapped air; thus compared to solid filaments they provide equal warmth for less weight. Both crimping and lubricating increase initial loft and re-lofting ability, and resist clumping. Because of its four holes, instead of just one, and its functionally superior wave-like crimp, Qualolli has been measured as

[illegible]

5-8% more efficient thermally and slightly more lofty than an equivalent weight of Hollofil. Both fibres approach some of the characteristics of down: good loft, a soft feel and relative ease of stuffing. Again Quilfil's crimp makes it superior, in comparison, to Paraguard, a continuous filament, solid polyester fibre also laid down in batts. It too, like Quilfil, has been silicized to improve its stiffness and loft when compared with the earlier, softer, flatter, resined batts.

When Paraguard has appreciably less loft than the short staple fibres but only a slightly lower thermal efficiency by weight. However, as a continuous filament it has a greater resistance to displacement and clumping, has no crimp to lose or flatten and, because of its more stable and manageable, and less stretching in manufacture. Consequently, Paraguard will retain its loft better, is more durable and has a slight price advantage in construction.

In summary, the slight differences would seem to be a trade-off.

Note that because of batting methods and the addition of resins, sound, weight variation of plus or minus 10% can occur in synthetic fills.

New innovations. As with down, the focus of the above synthetics has been the minimization of convective heat loss, and in the past manufacturers have not way increasing the loft of their bags except by adding more layers of fill. The consequent weight and bulk has helped shift some attention to the less significant forms of heat loss.

Radiant Heat Barriers (RHB) — thin shiny materials similar to a space blanket — work by reflecting the body's radiant heat back at you instead of letting it escape through the bag. Even though most insulations are dense enough to intercept these rays, the intercepting lure, slightly heated in consequence, will re-radiate — and so on, until radiation escapes from the bag's inner lining will add 55-70°C to the bag's rating. A sleeping bag with an RHB will be slightly lighter and substantially less bulky than a bag without an RHB and of equivalent warmth.

Vapour Barrier Linings (VBL) — generally this is a waterproof nylon inner bag, although an RHB without stitch holes is vapour proof. They work by trapping trapped moisture within the bag, raising the humidity until the skin is moist enough for transpiration to cease. A VBL will add 7-10°C to a bag's rating. It is essential to wear a full layer of clothing to avoid contact with the clammy nylon — thermal underwear is best. However, in our experience the ambient temperature must be genuinely sub-zero before a VBL can be used in comfort.

Design and construction. Irrespective of the thickness and combination of the various

Off-set quilting with central layers gives good coverage, but stabilization of the floating layer(s) is essential to prevent clumping.

Options are: sophisticated constructions proliferate, attempting to maximize loft and stability while maintaining the possibility of cold spots.

Zip. Continuous roll nylon zippers are preferred and unlikely to slip snagged fabric — self-repairing. Double-ended zips give greater versatility in venting and are preferred. Shorter zips give better consistent loft but reduce versatility.

Draft tubes are essential to cover zippers. The following restrictions are described in ascending order of efficiency — the plumper the tube and the fewer the through lines the better.

Two-dimensional through at base.
Always a through at base.
Off-set two-dimensional. If pushed against the zip, the thickest part of the tube will provide quite good insulation.



From left to right: two-dimensional, off-set two-dimensional, simple three-dimensional and three-dimensional draft tubes.

Simple three-dimensional is very good, although contact with the zip is not ensured.

Three-dimensional is best. Its erect, proud profile provides the most efficient seal.

Shell fabrics. The optimum is the lightest, strongest most durable fabric with the best or 'honey' Gane are the days when all anyone had a slick, clammy feel in morning, high thread-count, silk-like nylons fill all criteria. Cottons are heavy and will deteriorate but, if preferred, an inner sheet is a best option.

Hood and muf. A well-shaped hood, particularly in combination with a muff or wind collar, can overcome the stiff, open neck of synthetic bags, compensating for loose, inefficient fit. Flat-cut hoods alone will generally not close well enough — the only real test is to get inside and try it.

Features. Minor but useful additions are almost too numerous to cover although a combination of some of the following may well tip the scales in favour of one bag over another: Velcro closure on zip, hanging-loops, Velcro to position draft tube, extra large storage bag, pillow and/or storage pockets, and a bag that can be zipped to another to form a double bag.

Buying a bag. Try to establish how warm you sleep by comparison with camping friends,

particularly those of the same sex and preferably of similar age and fitness. Draw on their experience to assess their sleeping bags.

Decide on both the coldest conditions and the range of conditions you want the bag to cover. Establish a realistic budget.

Determine secondary priorities like weight, packed size and shape.

Having done your homework and established priorities, study the available bags at the various retail outlets. Disregard temperature ratings as an objective guide (despite the usual caveat about individual variation almost all are overstated) although they are useful for comparing bags in a range. Assess the bags yourself concentrating on:

loft and the factors which will ensure its even distribution and efficiency — draft tube, hood, shape and potential cold spots.

Once a model is selected, check the particular bag carefully — its weight, loft, stitching and so on.

Staying warm. A full length, pressure-blown (not chemically warmed) closed cell foam mat, or self-inflating mat, is essential. Even so try to locate your sleeping site over dry, non-conductive, organic material or facing that, aerated, sandy soil. If on one trip you notice heat loss to the ground get a better mat or a second one.

Eat a good meal, high in carbohydrates, just before bedding down — a high metabolic rate with the liver distributing nutrients will ensure good heat production through the night. Exercise briefly before retiring to get skin temperature up — the bag will retain the heat, the insulating layer heating more quickly.

Extra clothing can be added as needed but the hands, feet and head should always be covered. The greatest potential heat loss is through the head, particularly as the nose and mouth should not be covered as radiative problems can result — so good, thick balaclava is essential.

Follows action can pump heat air from the head of the bag so lock the bag closely around the body, close the hood or head cover over the forehead, drape a bulky, dry item of clothing around the neck to seal the head of the bag and sleep as still as possible. You may also try experimenting with radiant and/or vapour barriers.

Care and cleaning. Most important in the care of a bag is to compress it as little as practicable — store hanging (best) or fully rolled in a large container, in a cool, dry place. When walking, the bag should be aired every morning and should always be the last thing packed and the first unpacked. Let the stuff sack be as large as possible.

Wash in pure, non-detergent soap. While machine washing and drip drying is possible, the hard washing and drip drying will subject the bag to less fibre-matting, stitch-stretching and abrasion. •

Macgregor Stewart and Anthony Hardy

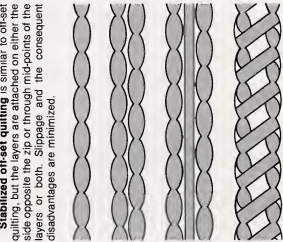
insulations mentioned above, in assessing the design and construction of a bag we are concerned with the evenness of the insulating layer and its proximity to the body.

Shape. Box-tooled 'mummy' bags will be several degrees (approximately 5°C) more efficient than a flat-cut, rectangular or semi-rectangular bag, particularly if it is differentially cut. Clearly the mummy shape contours closer to the body and will minimize internal contact to the body and the minimizing trapped air. The tighter the fit, the more efficient the bag. Remember, though, to be balanced against construction and differential cut (a shorter, inner shell than outer shell) both seek to minimize the possibility of cold spots caused by the compression of the insulating layer from pressure inside the bag.

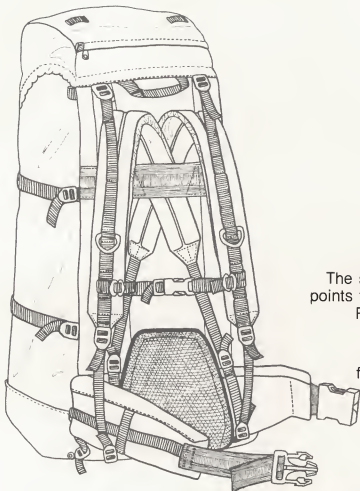
General construction. Sewn-through construction, inner and outer shells, sewn simultaneously to the insulating layer(s), results in compression of the insulation to virtually no loft on each line of stitching. Increased spacing of loft stitching will usually provide more consistent loft, but reduced stability of the insulating layer(s) will lead more quickly to displacement and clumping and, hence, further cold spots.

Off-set quilting comprises two sewn-through and off-set layers. The idea behind this construction is to line up a cold spot between the layers of insulation on the other. Slippage between the layers can line up cold spots and cause displacement and clumping.

Stabilized off-set quilting is similar to off-set quilting, but the layers are attached on either the side opposite the zip or through mid-points of the layers or both. Slippage and the consequent disadvantages are minimized.



From top to bottom: sewn-through, off-set quilting, quilting with central layer and shingle construction.



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Equipment



• **inflatable Canoes.** Relatively new to Australia, inflatable canoes are becoming more widely available. The **Narwhal Totem T350**, a two-person canoe (distributed by **Wild Country**, RRP \$620) is a surprisingly good performer in up to grade three water. As it is basically an open canoe, it is liable to swamping in big water.

The T350 is made from Onka, a new material made from a polyester material base coated with PVC on both sides. The manufacturer says that with the use of Onka, coupled with the very high standard of welding and vulcanizing, the T350 is extremely strong, durable and safe. The canoe's appearance, and its performance when tested recently, would appear to bear this out.

The T350, with a foot pump, instruction manual and repair kit comes in a handy carry bag, total weight about nine kilograms, which is easy to transport in the boot of a car. The inflatable seats are an unusual design, and lend themselves to a number of shapes and positions!

Overall, the T350 is a lively performer in white water and comfortable and easy to handle on flat water.

Yvonne McLaughlin

• **Blow Ups.** With more people rafting wild rivers, there is a corresponding increased interest in **inflatable rafts**. For those wanting something better and longer lasting than the two- or four-person Taiwanese variety, the German **Metzeler** inflatables are distributed by **Waves Overseas**.

One advantage of the Metzeler is that, even with one of its four major air tubes deflated, the raft remains manoeuvrable — great if you have a puncture. Also, the inflatable floor protects the rafter's bottom from impact, insulates it from the cold and gives the raft longitudinal directional stability.

The main drawback is the high cost, but used over a number of trips even the economics are

Metzeler Juca on the Kowmung River, Blue Mountains, New South Wales and, below, Narwhal Totem T350 inflatable canoe.

more attractive. Prices range from \$830 for the two-person **Jolly S**, \$2,350 for the four-person **Juca S** and up to \$4,400 for the massive seven-person **Mammut**. Metzeler also makes inflatable canoes which have been used to descend major rivers including the Franklin.



• **Tough Kayaks.** Cross-linked polyethylene is strong, and kayaks made from it are a lot more durable than those made from conventional fibreglass. When **Current Craft Australia** started importing the polyethylene **Intruda** from New Zealand it was breaking new ground (as reported in *Wild* no 9). Now another plastic kayak, the **Olympia**, is available from Current

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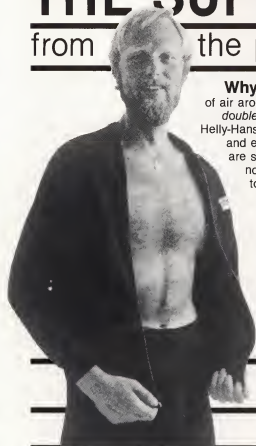
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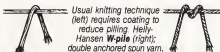
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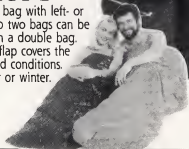
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The Olympia appeals to the serious white water canoeist. It features lines similar to the 76 Olymp, a three-position adjustable seat and good foot room through an open-pillar system. The current price is \$595, but this may be reduced due to the New Zealand devaluation announced in July.

• **Packs.** Karrimor continues to update its pack range. The successful **Jaguar** internal-frame packs now boast the Self Adjust System harness (SAS 1). This is similar to the Condor system (SAS 11, reported in *Wild* nos 12 and 13) except that the Jaguar does not have the Condor's adjustable hip belt. Two models are available, the **Super** (RRP approximately \$200) and the **Economy** (RRP approximately \$120).

The Lynx series has had a price decrease. All four sizes are under \$100.

Thoughtful design is a feature of the new **Karrimor Spindrift** day packs. There are internal key-ring clips, vacuum flask pockets and goggle pouches, external pockets and glove clips. Especially suitable for day walking and ski touring, the Spindrift day packs come in a range of sizes with varying feature combinations. Prices range between \$11 and \$42.

In addition, the new **Karrimor On-Off** day packs are designed for specific applications and include a cyclist's pack with a bicycle pump scabbard.

Jim the Backpacker has introduced two models of day pack. Teardrop in shape, they have a top zip, front pocket and waist strap, but no back padding. The seams are well constructed. Good value at \$25 for the 20 litre model and \$30 for the 27 litre model.

• **Underwear.** Most people would agree that polypropylene underwear is excellent. It is light, stretchy, warm and wicks away body moisture.

A new brand to appear on the market is **Everwarm**, imported by **Skima Imports Australia**. It is made in New Zealand from Italian Merakion fabric which, unlike some other polypropylene fabrics, is 100% polypropylene. We tried Everwarm long johns and found them excellent, although they were shorter in the leg and bigger in the waist than the equivalent sized Helly-Hansen Lifa. Does this say something about the physique of the average Kiwi? Long johns and round-neck, long-sleeved shirts sell for \$29.50 each.

Silk underwear is also available. This beautiful natural fibre has properties remarkably similar to the new synthetics. Made in China for **Karrimor**, shirts and long johns sell for about \$50 each. Balacavas are also available for \$9.50.

• **Suckers.** USA certainly is the home of gadgetry, at least when it comes to outdoors equipment. One gadget from USA which could be useful in those parts of Australia where water quality is questionable, is the **Pocket Purifier**. Weighing only 30 grams, this tubular-shaped device is 20 centimetres long and five centimetres in diameter. A series of filters and a resin clean the water simply by the user sucking water through it. It is claimed that the Pocket Purifier has been used on raw municipal sewage and stagnant pond water, providing good tasting, microbiologically potable water!

Not suitable for use with salty or brackish water, it should be noted that there are small quantities of iodine in the treated water, so pregnant women and people with thyroid problems should consult their doctor before drinking it. The volume of water it will clean depends on the water quality. This can vary from

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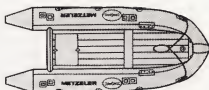
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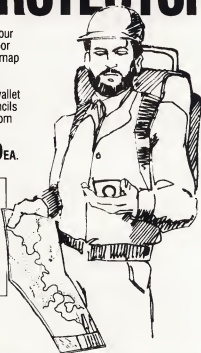
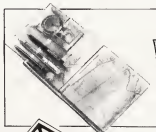


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as little as one litre for really dirty water to 450 litres for clear but biologically contaminated water. When it reaches its capacity, the Pocket Purifier becomes clogged. Imported by **Outdoor Survival**, it has a RRP of \$14.40.

• **Orienteer's Compass.** The **Suunto Norcompass**, which was used very successfully in the 1983 World Orienteering Championships, is now available in Australia. (Distributed by **Outdoor Survival**, RRP \$24.50.) The Norcompass has a fixed compass housing



Suunto Norcompass.

and no calibrations, so it is not suitable for bushwalking. For use in orienteering, the map needs to be folded and the compass held in position on the map while the user runs or walks. The Norcompass has a non-slip rubber pad and thumb strap to facilitate this.

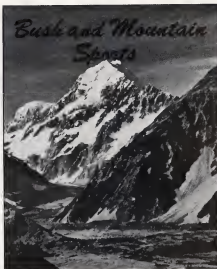
• **Gore-Tex Jacket.** The main disadvantage with Gore-Tex is its high price. **Paddy Pallin** has introduced a budget-priced Gore-Tex jacket called the **Colo**. At \$99 it can hardly be called cheap, but compared with other Gore-Tex jackets it is good value. For those who don't know, Gore-Tex has the twin advantages of waterproofing and breathability. The Colo has taped seams, two storm-proof outside pockets, Velcro-sealed front zip opening, variable cuff closure and adjustable hood fasteners.

• **Roof Rack.** The Swedish **Athlet** car roof rack is notable for its versatility. Accessories make the rack suitable for carrying skis, canoes, bicycles, windsurfers or luggage. Caravan spoilers are even available. Of interest to people carrying expensive equipment, there are locks for securing both the rack to the roof and the luggage to the rack. Imported by **Skima Imports Australia**, the basic bars sell for about \$65 and the accessories vary in price from \$16 to \$50.

• **Case Study.** Available from **Scout Outdoor Centres** is a good value **map case**. Much better than a plastic bag, it has spaces for pencil, compass and, most importantly, maps. At \$1.40 you won't be frightened of throwing it out when you need a new one.

• **Climbing Equipment.** Perhaps as belated acknowledgement of this unusually equipment-oriented and rapidly-growing sport, the Australian market is experiencing a flood of imported climbing gear.

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as mentioned in *Wild* no 11) it is also one of the cheapest. (The well-known Whillans harness weighs 620 grams, plus karabiner.) The former point, in particular, should appeal to mountaineers and other climbers conscious of saving weight, assuming they choose to overlook its rather unaesthetic appearance. In *Wild* no 11 we criticized the buckle; the manufacturer claims to have improved it with a new two-piece buckle.

Paddy Pallin is importing what appears to be a copy of the Whillans harness. The **Zero Point harness** is from Japan and includes a number of worthwhile refinements on the



Into harness; Zero Point.

Whillans design. However, at 675 grams (plus karabiner) it is even heavier. RRP about \$59.

Three **Cassin harnesses** are being imported from Italy by **Outdoor Survival**. The lightest is the **Yosemite** model (535 grams). RRP \$55. It has some good features but the leg loops may be found rather restricting by male climbers! **Outdoor Survival** is importing much of the **Cassin** range of climbing gear including nuts (like copies of Stoppers, Rocks and RPs), karabiners, crampons (with old-fashioned webbing straps), a figure-8 descender, helmet (heavy and not well padded) and an interesting range of ice tools. The **Cousin ropes** it imports from France are not the cheapest around (RRP \$115 for 50 metres of nine millimetre rope; \$125.50 bi-colour) but they look good and handle very well. They are also available in 10.5 millimetre diameter.

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The popular 'Take a walk on the *Wild* side' **windbreakers** have been revamped. The same slogan is now printed in light blue, has been reduced in size, repositioned and accompanies the silhouette of two walkers. (See page 19.) The garment and price are unchanged, \$17.95 each, including postage, from *Wild*.

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ANU Mountaineering Club meets first
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Sports Union, the President (062)
81 0357 or Treasurer (062) 49 4494.

Binna Burra Bushwalkers Club,
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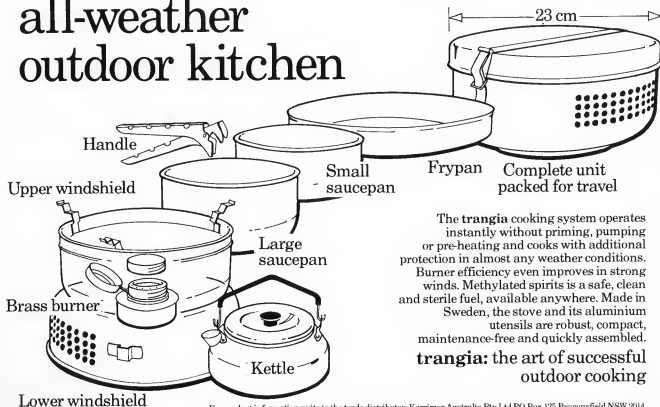
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The Victorian Climbing Club meets at
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Gatehouse Street, Parkville 3052.
Visitors and new members interested in
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